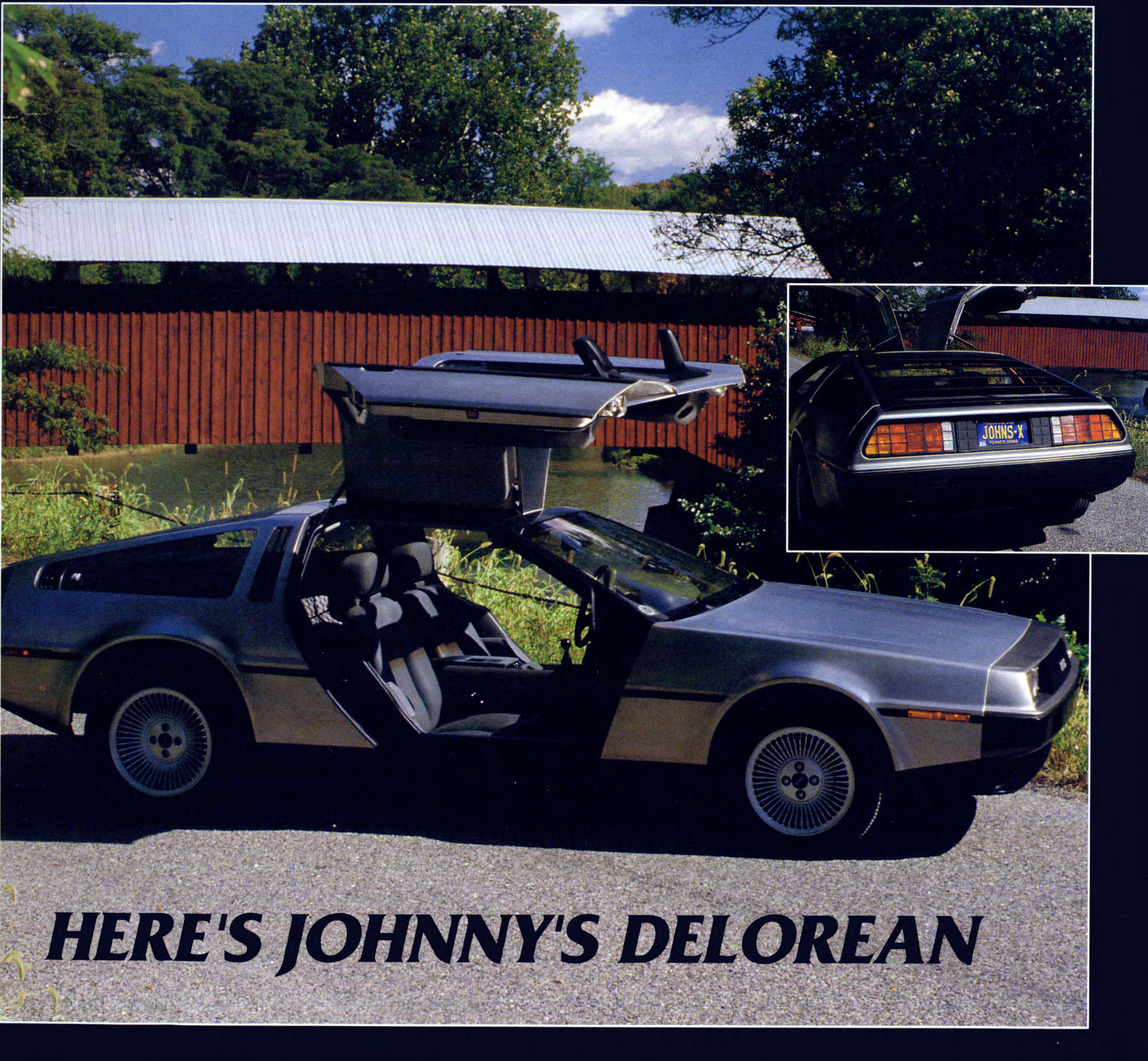
DELOREAN WORLD®

Published Quarterly by the DeLorean Owners Association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DeLorean Parts

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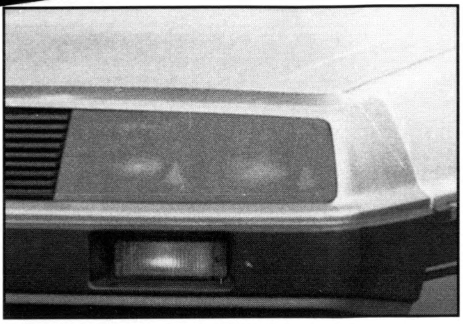

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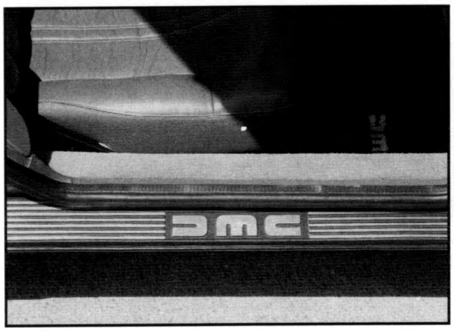

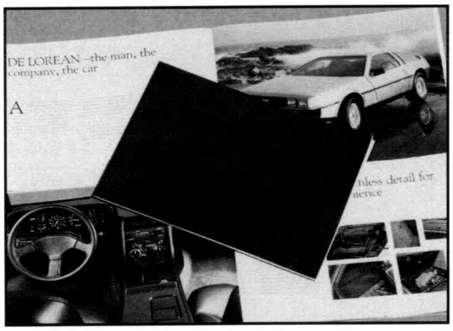

ORIGINAL DELOREAN BROCHURE – Original full color brochure that came with the car. 16 pages with 2 large, fold-out color pictures of the car.
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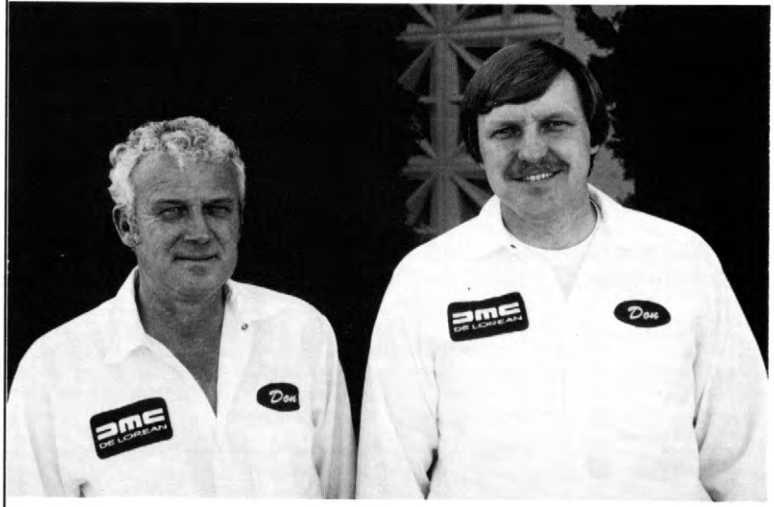

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This muffler sounds deeper and a little louder. Manufactured from grade 304 stainless steel, it won't rust. A high-quality item. Bolts on!

Catalytic Converter Bypass, Stainless
Converter Bypass Resonator, SS

#2. CARPATHIAN BURLWOOD TRIM SET

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Treat yourself and your car to traditional British luxury. Add the warmth and beauty of our Carpathian Elm Burlwood interior trim set!

Set includes dash top strips, upper and lower console covers including AC vent surround and radio face. Easy to install and remove - won't damage stock parts. Protects them! (Fits 5-speed cars & Black interiors, too!)

Horn Pad Cover w DMC Logo
Glove Box Lock
Instrument Pad Cloth Cover

#3. AERO-SIDESKIRTS WITH AIR SCOOPS

Lotus Designed!

Lotus developed these ducted skirts after extensive wind tunnel testing to achieve maximum cooling airflow. The design suits the DeLorean well! Includes 2 flexible air tubes.

Good ground clearance. The ruler in Photo #3 shows 6½" of clearance under the skirt. (And this car has been lowered with our Euro springs.)

Quarter-panel Extensions

#4. AERODYNAMIC REAR WING

A Tail for Your Gull!

Finally, a rear wing that doesn't block your view out the back! We've designed the wing stanchions to put the thin wing exactly in line with one of the slats on the rear louver.

Light weight, quality aluminum and fiberglass construction. Painted. Size - 1" x 6" x 52"; 7 lbs.

Tail light blackout Panel
Eye-level brake light
Stainless DeLorean letters
Stainless "DMC" for door sills

#5. RADIO CONTROLLED MODEL

Asphalt Racer!

A great idea for DOA club outings. Eight cars can be raced at a time.

The 1/12th scale car is over 14" long. Easy to assemble kit includes a twin-stick radio, detailed clear DMC body and motorized chassis.

Body, Motor and Chassis
Clear Lexan DeLorean Body

#6a. EURO-SPEC SPRINGS

Two-Year Guarantee!

We imported a set of Euro-Spec. springs from England and had them reproduced here in the USA using computer controlled machinery, the best PVC-coated rust protection and tough American spring steel. Satisfaction guaranteed!

Gain all these benefits: a lower nose, improved handling, easier steering and a smoother ride. More supple riding.
(Lowered car in Photo #3.)

#6b. REAR ANTI-ROLL BAR

Makes a Difference!

The DeLorean didn't come with a rear bar. Automotive magazine test drivers criticized it for front end plowing on turns, sluggish turn-in response, and rear-end body roll. We fixed it!

The manufacturer of our anti-sway bar handling kit happens to own a DeLorean. Can't do better than that. This handling kit works! Improves both stock or lowered suspensions.

#6c. KYB GAS-AJUST SHOCK ABSORBERS

Lifetime Warranty!

Stock Girling shocks are no longer in production. So we asked KYB to dissect the stockers and make new high-performance gas shocks to fit.

They give better shock control over large bumps and less harshness on small bumps - due to better valving and their famous automatic Gas-Ajust-ability.

After 7 years, your shocks may have deteriorated or lost gas pressure - even just from sitting.

#7. DELOREAN PILOTS SATIN JACKET

Show Your Colors!

Lined jacket with embroidered DMC and DeLorean logos. Limited supply!

#8. PEWTER CAR WITH THE DOORS UP

A Collector's Item!

Doors are open, and full interior! Companion to the doors-down model.

Car Mounted w/pen set
Doors Down Pewter Car
Bookends (both cars)
Pewter Key Chain "DMC"

#9 HISTORIC MARQUE TECHNICAL POSTER

A True Frame Up!

Three color photos, color cut-away illustration & technical data panel. 19" x 25".

FOUR LOWER SPRINGS (Not Shown)

Don't Torch Them!

Thinking about swapping your front springs and torch-cut rear springs to lower your DMC? First, consider our custom wound, new coil springs.

Stock front and rear specifications are used - only shorter. Lowers the front approximately 2" and rear 1". Now PVC-coated.

LOWER FRONT SPRINGS (Not Shown)

Make It Look Right!

Exact reproduction stock DMC front springs - except they are shorter. Lowers front approximately 1½". For better visibility out front and easier steering - you'll be amazed!

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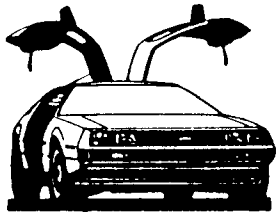

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	HEADLIGHT BLACKOUT COVERS	75.50	
	TAIL LIGHT & LICENSE PLATE BLACKOUTS	145.00	
	STAINLESS LETTERS - DeLorean Grill Badge	50.00	NEW
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	DASH COVER (Gray or Black)	39.50	
	WINDSHIELD SUNSCREEN with storage bag	51.50	
	STAINLESS BUMPER & SILL LETTERS	$95.00	
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	PEWTER "DMC" TIE TAC	7.00	
	GULL-WING WATCH	59.95	
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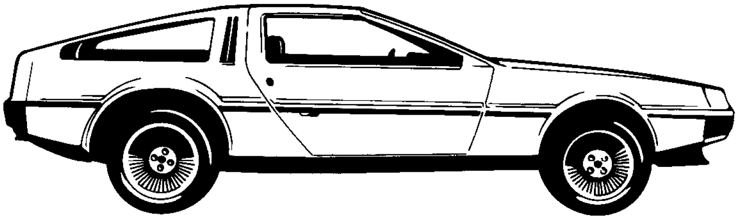

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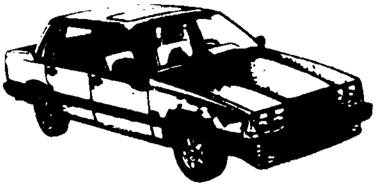

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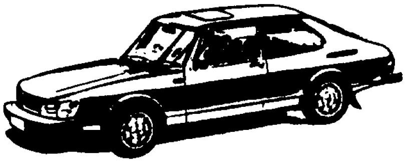

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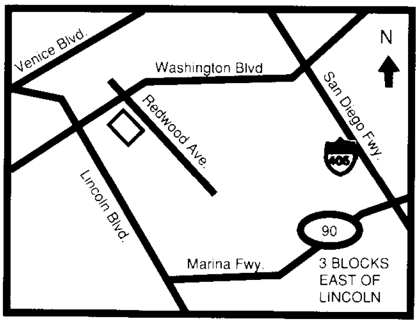
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DELOREAN WORLD

Volume 7, Number 4

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On The Cover

The Johnny Carson DeLorean, history in progress, in front of one of the few remaining historical covered bridges, Pottsgrove, PA.

Courtesy of current owners, Kerry and June Stark, PA.

Photograph by Kerry Shirk of the Picture Place, PA.

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EDITOR'S NOTE

GUEST EDITORIAL

CLOSET OWNERS

BY BRUCE BENSON, Minnesota

I must compliment you on the art work in the latest issue of DeLorean World. It's the best yet. I managed to videotape the ESPN coverage of "One Lap of America" and in many respects, DeLorean World's coverage was more interesting. My compliments to you and the rest of the staff on the terrific layout work in this issue.

I was spending the last remnant of the evening reflecting on the conversations I'd had at a local car show that day when Kay Myhre called. She was looking for clarification of a portion of a technical article I'd submitted for "DeLorean World". In the course of talking to her, I told her of seeing a brief mention of Team DeLorean's "One Lap of America" participation in Brock Yates' "Car and Driver" magazine column. I wondered if an article was planned for an upcoming issue of "DeLorean World". I was referred to the author of the "One Lap" article and after another call, I returned to my reflections of the day adding two more conversations to my list.

The car show I attended had a class for Italian exotics and they decided DeLorean and Guigiaro sounded more Italian than Irish, so there I sat between two very exotic Maserati Ghibli's, which were also styled by Guigiaro. The Ghibli nearest me was owned by a fellow I've met at several car shows over the last few years.I mentioned a neighbor of mine who had recently abandoned his restoration plans for a 1962 Maserati 3500 GT. To my surprise, this fellow had just purchased the car from my neighbor. As we spoke of small worlds, a Jensen Interceptor piloted by a young man, with his huge Labrador Retriever riding shotgun, pulled alongside of us. My Maseratti friend exclaimed, "Todd!" He turned to me and said, "Todd originally sold that car to your neighbor." Todd restores antique Cris Craft speed boats and has quite a following in that respect. In ten minutes, we traced the history of that rare Maserati over the last fifteen years.

The point of my reflecting on all of this in "DeLorean World" is to point out there are so many interesting people to meet if you get out there and get a little active in the DeLorean Owners Association and in the auto hobby circuit in general. There seems to be many closet Delorean owners who have their cars hidden away collecting dust and never realizing the enjoyment of owning this car. I'm not a particularly outgoing person, but car people are eager to talk to other enthusiasts and you'd be surprised at the wealth of information, friendship and plain old good times there are in your own area.

Minnesota has a road racing track called Brainerd International. Vintage racing and club events are not advertised to the public and they're usually held on off weekends. I've met people at various automotive gatherings who are involved in these events and they are always eager to extend an invitation to fellow enthusiasts. These events are great places for sports car types. In our area, we have a local dentist who regularly thrashes a $9 million dollar Ferrari GTO around the track. He believes in driving it to the maximum. I've also seen an old Buggatti racer sailing around the track. There are interesting people and cars everywhere. Many of these sports car types aren't all that familiar with the DeLorean's finer points and many, after inspecting the car, walk away with new found respect for it. This type of exposure helps enhance the value and image of the car. It also makes your face familiar to other car people in your area.

One reason for my pursuit of these activities and contacts is my own enthusiasm for auto sports in general, but another is the fact that my area has several closet DeLorean owners. One fellow told me "car clubs are a California phenomenon". One trip to Brainerd, a local car show, or the September open house at Classic Motor Books in Osceola, Wisconsin, will quickly disprove that conception. I'd certainly think anyone willing to put cash on the line to own a car, such as the DeLorean, would be somewhat of an enthusiast and would want to get their money's worth and learn to enjoy owning it.

I had a very busy year and the car show I attended was my first for the year and also one of the last of the season. It left me feeling a little remorse knowing I'd have to wait until spring for more. I'm vowing to take more time to enjoy my DeLorean next year and I hope this entices others to feel the same. In the mean time, I have many memories to reflect on and several new friends and acquaintances to correspond with.

In this issue, I'm pleased to introduce a number of new authors who have written excellent articles I am certain you will enjoy reading. My thanks to those who have set an example for many more of you.

May I extend my personal invitation to you to introduce yourself to the membership and in so doing you will join a distinguished group of authors who have so generously contributed to our reading pleasure in the past.

Kay Myhre

Editor

PRESIDENT'S MESSAGE

BY KJELL MYHRE

In the closing months of 1990, a large number of DeLorean owners gathered at a few chapter events I had the pleasure of attending. The Southern Jubilee in Houston was outstanding and well planned, adding to the long list of memorable gatherings over the years.

A second gathering in Buellton, near the Danish Village of Solvang, was enjoyed by members not only from San Diego to San Francisco, but it also acquired an international dimension by the attendance and participation of a delegation from Sweden, Goran Modin and Kim Bergman, (Svenska DeLorean Sallskapet). In speaking to the attendees, Mr. Modin provided a personal report of owners in Sweden. Indications are that Kim Bergman might be disassembling a couple of DeLoreans and sending the parts to his home country for reassembly.

The festivities in Buellton included a performance by Danish folk dancers and the following day, a parade of DeLoreans through the streets of Solvang, official and otherwise. This parade of DeLoreans was requested by the ever present hospitality of Solvang residents, and all cars were decorated with Danish flags. Yours truly represented the Norwegian contribution to this Scandinavian-flavored event.

As for the rest of the country, I have greatly enjoyed reading about your local activities which become part of the whole mosaic that comprises this international automobile's fraternity. I also want to thank a number of you who have written letters to the Editor or myself. Many improvements have been implemented based on your positive expressions.

As a word of explanation, the employment responsibilities of the Editor involved out of state travel for a period of several months. Not only did this adversely affect my favorite home cooking, but also it hindered getting the current issue of DeLorean World to press. Since good volunteer editors are hard to find, adaptation to the circumstances became my solution, but I could hardly wait to see this issue in print.

In scrutinizing a computer printout, provided by John Truscott of the DeLorean Data Center, a chart was constructed to reveal the trend of the Association and our publication.

The number of copies per issue has remained substantially the same for the past 7 years. The average issues have been sold as back issues and the number of out-of-original-print issues is increasing. However, the total cost of printing DeLorean World in the same time period has been increasing at a steady rate. In the past, your membership dues have been modestly increased for these reasons. Based upon discussions with the Board, currently a finance committee has been created to enable the best possible growth management over the coming years.

For those of you who never get enough technical material, may I share a couple items under current resolution. At this stage, the odometer on my car reads about 125,000 miles. In order to manage temperature control, especially on hot days of 100 degrees plus, and in stop and go traffic, I have installed a three core radiator instead of the factory two core which nominally suggests that I now have 50% more cooling capacity. I have since driven in 100 degree temperature, and in stop and go traffic without any hint of overheating or fluctuations in the reading indicator.

Contrary to what it used to do previously, it holds rock solid on the first marker and I am confident, in the event it is 110 degrees traveling a steep grade uphill, as may be the case when caravanning to Las Vegas, overheating will not occur.

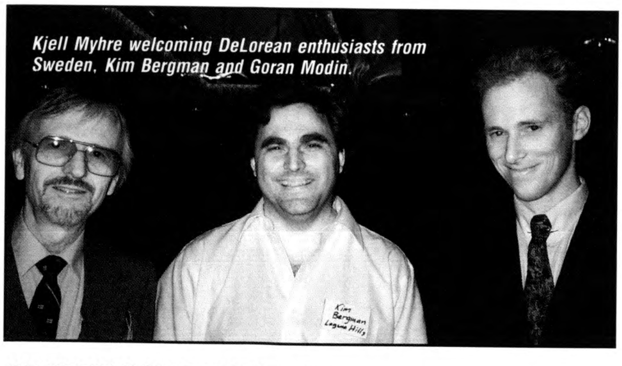
The second item that has been noticed in the last few months, is that the shock absorbers on the left rear and/or on the right front are deteriorating faster relative to the ones on the right rear and left front which appear to be firmer. This is noticeable driving at highway speeds when there are dips or bumps which cause a slight rolling action about the axis from the left front to the right rear.

Currently, I am on my third set of tires and upon installation of the fourth set, probably within the next six months, replacement of the original shocks will then be in order. Some of you may know that additional equipment has been installed on my car and it is not necessarily factory original.

The addition of instrumentation to the vehicle is an ongoing process and will eventually include added temperature and pressure readouts monitoring the performance of the engine.

This year I'm looking forward to a local event in Pasadena, my old stomping ground, with great expectations. However, the crowning event this year is the celebration of the last decade in Las Vegas this fall.

Without divulging any details, what I've heard from the Activities Director will be outstanding indeed. I don't know if we'll have international visitors or not, but if you decide to attend for the first time, you will find out why I look forward to meeting countless friends that I have acquired over the past 10 years. The contributing circumstances are: Kay and I bought a DeLorean in 1983 and promptly joined the Delorean Owners Association thereafter. We thought it might be like the enjoyment of our previous membership in the Porsche Club. But we soon found out there is nothing like the contagious enthusiasm of the DeLorean Owners Association.



Kjell Myhre welcoming DeLorean enthusiasts from Sweden, Kim Bergman and Goran Modin.

Area Regional Chapter Calendar of Events for 1991

Past - Present - Future

BY MILLIE BERNSTEIN

If you've missed an event in your area, make sure you contact your local Area Regional Chapter Coordinator regarding upcoming activities and to get on their mailing list.

AREA REGIONAL CHAPTER 3

Minnesota
Bruce Benson, Coordinator
(612)429-6912

AREA REGIONAL CHAPTER 23

Ohio
Guy Avellon, Coordinator
(216)734-529-0953

Apr 20	Tour of Kapac Inc. Columbus Drive Tour & Picnic, David Lancaster
May 1 (T)	Rallye School / Rallye Cleveland
Jun 16	Stan Hewitt Hall, Akron, Wine and Cheese Party
Jun 21-23	Mid-Ohio Vintage Car Races, Lexington
July 20-21 (T)	Rallye Golf Outing, Clinic Peek 'N Peak, Clymer, NY
Aug (TBA)	Shaker Square British Car Club Show
Aug (TBA)	Weekend Outing, Ohio Lodge
Sept 22	Start caravan to Las Vegas (Meet in Indianapolis) for Delorean Expo 91

AREA REGIONAL CHAPTER 5

Georgia
Tom Long, Coordinator
(404)449-1968

Feb 21	Trip to Columbus Georgia, GA for the "Taste of Columbus"
Feb ?	Tech session at Ecotech
Mar 17	St. Patrick's Day Parade and Irish Celebration in Dublin, GA
Apr 20	Brunch at Unicoi State Park plus driving through the mountain to Amicolola Falls
May 19	Tech session/British Motor Car Show. BBQ Picnic at Byrne and Marian Heningers
June 15	Overnight trip to Ashville, NC and Chimney Rock State Park
July 13	Tech session followed by Steak Dinner at the Old Town Athletic Club
Aug 17	Bowling and pizza party
Sept ?	Trip to Birmingham, AL for a day at the race track
Oct 5	Tech session
Oct 19	Overnight trip to Nashville, TN and the "Grand Ole Opry"
Nov 15	Caravan through North Georgia with an early dinner at the Woodbridge Inn in Jasper
Dec ?	Christmas dinner dance at the Atlanta Athletic Club

AREA REGIONAL CHAPTER 35

Stoney Point, New York
Gail Geraldi, Coordinator
(914)429-0121

Dec 2	Holiday Party at Nicoles Restaurant
Feb	Winter meeting
Apr 26-28	Eastern Regional Run Two, Nevele Golf and Country Club, Ellensville, NY

AREA REGIONAL CHAPTER 22

Massachusetts, Maine, New Hampshire
Lloyd Teran, Coordinator
(617)653-1720

Apr 25-28	Eastern Regional Run Two, Nevele Golf and Country Club, Ellensville, NY
June 16	Newport Car Festival, Portsmouth, RI
Sept	Annual Dinner

AREA REGIONAL CHAPTER 36

Long Island, New York
Eleanor Rogers, Coordinator
(516)491-1248

Jan	Brunch at Salisbury On The Green, Eisenhower Park (Election of officers)
Feb	Tech seminar at Rob Grady's
Mar	Anniversary Dinner
Apr 26-28	Eastern Regional Run Two, Nevele Golf and Country Club, Ellensville, New York
May	Sports Car Club of America Car Show, Planting Fields Arboretum
Jun	3rd Annual Picnic
Sept 26-29	Delorean Expo 91, Tropicana Resort, Las Vegas, NV
Oct	Rallye to Long Island's East End
Nov	Rallye to Hyde Park, NY
Dec	Holiday Dinner Party

AREA REGIONAL CHAPTER 9

Southeast Texas
Harold McElraft, Coordinator
(713)993-4260

Mar. 2	Tech Talk and Chapter Meeting at DeLorean One
Mar. 16	St. Patrick's Day Parade and Irish Activities
April 20-21	Bondurant School of high performance driving for DeLorean owners
May 4	Regular bi-monthly meeting, noon, at DeLorean One
May 27	Memorial Day Parade (Preliminary)
July 4	Friendswood Fourth of July Parade (Preliminary)
July 13	Regular bi-monthly meeting, noon, at DeLorean One
Sept 7	Regular bi-monthly meeting, noon, at DeLorean One
Sept 26-29	DeLorean Expo '91 in Las Vegas
Nov 2	Regular bi-monthly meeting, noon, at DeLorean One
Dec 7	Christmas Party (Preliminary)
Jan 11, 1992	Regular bi-monthly meeting, noon, at DeLorean One

AREA REGIONAL CHAPTER 17

Central California
Dean Kimball, Coordinator
(415)944-4982

A REAL MYSTERY

BY *DAVID KNUDSON, Member Communications Director*

Last week, the Orange County (California) Register Newspaper published an article covering the bankruptcy of the DeLorean Motor Car Club of America.

This was a bit surprising to me because I thought they had disappeared years ago.

Back in the early 80's, I saw one of their newsletters which, I believe was called something like DeGullwing. Most of it was devoted to promoting a cruise to the Caribbean. Years later, I heard the cruise never sailed.

Then periodically, the club's name would come up when a DeLorean Owner would report he mistakenly paid dues to their group thinking they were the DeLorean Owners Association.

The masthead on the newsletter that I saw claimed they had around 3,000 members. This was always difficult for me to believe, but who knows?

In later years, someone told me the owner of the club simply ended up selling DeLorean parts then faded away.

DeLorean World tries to disemminate accurate, up-to-date information of interest to DeLorean owners so I feel remiss in bringing you this vague, third hand news about the demise of what may or may not have been a viable DeLorean source. But the DMCCA is a real mystery to me.

If you were a member of this group or can add or subtract from any of this, I'd appreciate your informative letter. Write David Knudson, 1149 Arcadia Ave. #3, Arcadia, CA 91007.

Area Regional Chapter 5

by Tom Long, Coordinator

Ad Valorem Tax Shock: Tom Stearn received a shock recently when Gwinnett County (Georgia) assessed him $695 for his 1991 Ad Valorem tax on his DMC! The state informed him they decided his DMC had gone up in value, but it was not in their listing of cars so they decided on this new tax figure. My tax wasn't close to that when the car was brand new. He is required to pay up before he can appeal the case. My Ad Valorem tax was $87 this year so this tax appears questionable, to say the least.

Technical Tip: The best engine cleaner we have found is "S100" and is available from high class motorcycle shops. It is applied to a cool engine, then rinsed off with cold or warm water. However, be sure to start the engine immediately after it has been rinsed. Run the engine until it reaches normal operating temperatures before shutting it off and putting it away. Without this all important second step, condensation can cause corrosion and "freezing up" of various components (such as the starter solenoid).

Area Regional Chapter 23

by Guy Avellon, Coordinator

In Ohio we started a truism: " What do you get after two days of rain?"

"Monday."

CONTINUED ON PAGE 12

Chapter Calendar (CONTINUED)

AREA REGIONAL CHAPTER 2

Pennsylvania
Ronald Finelli, Coordinator
(215)789-4326

Jan	Super Bowl Party
Feb	Atlantic Classic Car Auction & Flea Market, Atlantic City Convention Center
Mar	Luncheon to elect officers and plan 1991 schedule
Apr 26-28	Eastern Regional Run Two, Nevele Golf and Country Club, Ellensville, NY
May	Annual door adjustment
June 30	Philadelphia Vintage Grand Prix Concours and Race, Fairmount Park, Philadelphia, PA

AREA REGIONAL CHAPTER 7

Northern Illinois & Southern Wisconsin
Don Gowler, Coordinator
(312)397-0322

Apr 21	Opening Brunch & Election of Officers
May 18	Tech session
June 23	Social activity
July 20	Tech session
Aug 18	Social activity
Sept 21	Tech session
Oct 19-20	Social activity, All dates are tentative

AREA REGIONAL CHAPTER 12

Southern California
Dev Michael, Coordinator
(714)546-2934

May 18	Who Dunnit Mystery Rallye and Banquet, Pasadena, CA. For information, call Mary Lou Knudson (818)446-0650

CAPTER 23 *(FROM PAGE 11)*

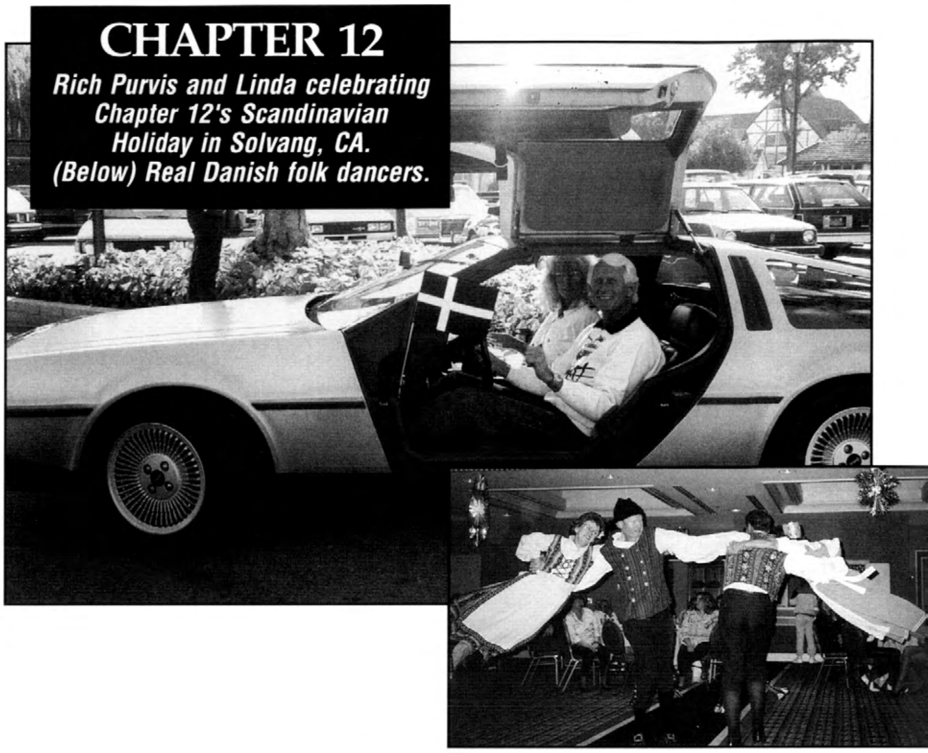
Or, " How do you make it rain?"

"Call a DeLorean meeting."

Despite the rain, Chapter 23's events were successful.

The picnic in Columbus had 18 cars participating. The coordinator was late to the party and missed most of the festivities due to an unexpected medical appointment, a prelude to his operation for a pacemaker, at 44! All is well and recovery was fast, now he and his DeLorean are both turbocharged!

Of special note, at one of our events, was the attendance of Jane Nebel from Kapac, Inc. This was the group that bought much of the DeLorean inventory. She gave a brief talk and graciously provided door prizes to members: posters, hats, patches, etc.



CHAPTER 12

Rich Purvis and Linda celebrating Chapter 12's Scandinavian Holiday in Solvang, CA. (Below) Real Danish folk dancers.

Beautiful 10th Anniversary Commemorative Wine Glasses

What an elegant way to toast the 10th Anniversary of our treasured marque. These understated goblets will be the talk of your parties this year and collectibles ever after. They have been crafted in a limited quantity so we suggest you order now.

1 glass: $5.50
Set of 2: $10.00
Set of 4: $19.00
Set of 6: $28.00

Very limited quantity. While supply lasts.

DELOREAN OWNERS ASSOCIATION

Shipping :
$2.25 for orders $25.00 and under; $3.50 for orders $25.01 to $40.00; $4.50 for orders $40.01 to$55.00; $5.50 for orders $55.01 to $70,00; $6.50 for orders $70.01 to $95.00; $7.50 for orders $95.01 and over.

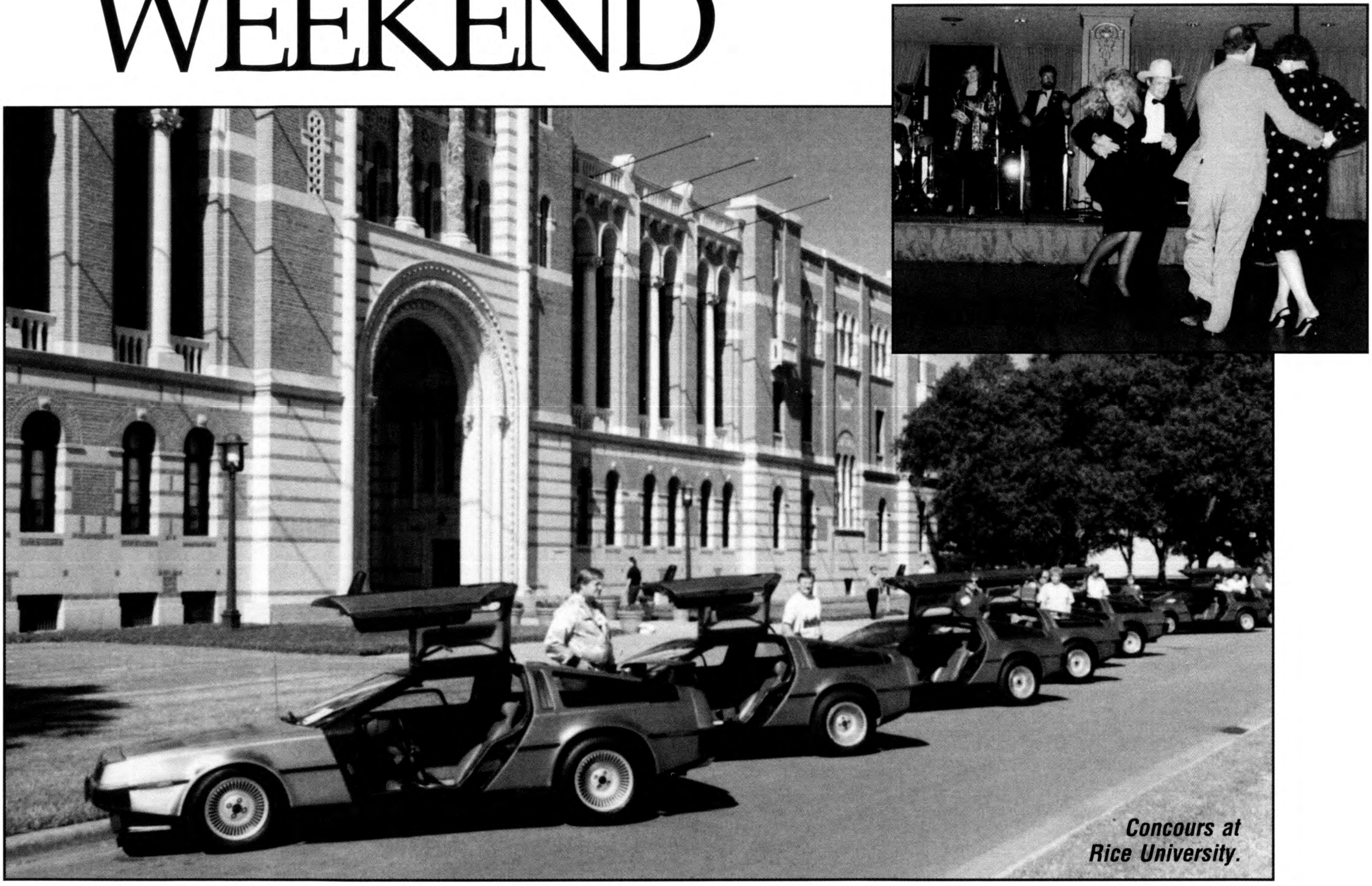
Please allow 4-5 weeks for delivery.

Sales tax @ 6.5% California residents only.

Mail order and check (including shipping charges) payable to:

DeLorean Owners Association Products
8900 Oak Park Avenue, Northridge, CA 91325
Phone (818) 993-1433

SOUTHERN JUBILEE WEEKEND



Concours at Rice University.

BY J. FRED WHITE, Chapter 9

Houston, Texas was the site of Chapter 9's Southern Jubilee held on October 12-14. Beautiful weather with clear blue skies, eighty degree temperature, and Houston's friendly attitude all meshed for a fun-filled weekend, a true bluebird weekend.

As guests arrived on Friday at the Wyndham Warwick Hotel, they were warmly received by Hilton Collins and Jack Dean. Jack and Carol Dean prepared the information packets including "Jubilee" T-shirts.

A kickoff reception was held in the Versailles Room on the twelfth floor overlooking the Houston skyline, Hermann Park, Rice University, the Medical Center, and a brilliant red sunset. Hors d'ourvres filled a twelve foot long table which in typical fashion was decorated with fresh cut yellow tiger lillies.

A track was laid out on the floor in the Versailles Room, compliments of DeLorean One, who provided electronic DeLoreans for the enjoyment of nimble fingered fans.

DeLorean Owners Association products were sold by Robert and Penny Powers. Raffle tickets were available from Barbara Wells, Karen McElraft, and Katherine Nelson. Raffle prizes included a portable TV; electronic DeLoreans; designer DeLorean sweatshirts, donated by member Susan Swilley, designed in emerald green with headlights made of rhinestones; computer enhanced photos from Bob and Barbara Wells; Cobra radar detector; CB radio; DeLorean jewelry from DeLorean One; AM/FM radio; an official DeLorean Owners Association

CONTINUED ON PAGE 17

Your DeLorean Investment–the second decade

Ed Bernstein
Co-owner of DeLorean One

As you probably know, 1991 marks the tenth anniversary of the DeLorean automobile. Believe it or not, our marque is now a "classic."

In a way, I have a unique perspective on these last ten years because I've been with the car since the beginning. At first, I was strictly a DeLorean owner. Now, I'm an owner of a DeLorean as well as a DeLorean service center.

I'm still proud to drive my car anywhere and it never fails to get attention. Even in wild and woolly LA.

However, when Stephen Wynne and I first opened DeLorean One, I was very surprised to see that so many of the cars had been badly neglected.

Then, as the years went by, the amount of neglected cars and the degree of neglect increased considerably. In fact, some of the DeLoreans that we see today are in such bad shape that they're little more than scrap.

You might think that I enjoy seeing broken down cars show up at DeLorean One because I make my living fixing them. But, to the contrary, it bothers me to see such a beautiful car abused. What's more, the owners of these cars only get upset when we tell them how much it will cost to get their DeLorean back into shape.

Condition is everything.

Owning a DeLorean in the 90's will be either a blessing or a curse. It will all depend on the condition of your car. If it's a bucket of bolts, that's all it will be worth. However, if it is well maintained, you won't believe what collectors will pay for it.

Most of the auto magazines have listed DeLoreans as one of the top ten collectibles. And to bear this out, we're getting more and more calls from all over the world from collectors. So, the bottom line is, if your car is in poor condition, it will be worth very little in the nineties. If it has been well maintained, it will be worth plenty.

What is your car worth?

Whether you intend to sell your car or not, you're probably wondering what your investment is worth today. It's important to know that a lot of its value is based on demand and demand is growing. But most of this demand will not come from the general public. Astute collectors who know exactly what to look for are the biggest buyers today and they will be in the future. These people are automotive aficionadoes who simply want to drive another rare car or add the marque to their collection. They come from all over the world.

In the next few issues of DeLorean World, we will cover some of the main areas of the marque that we have found that knowledgeable collectors are looking at:

Stainless Steel Bodywork–The crowning glory of your car is its stainless steel shell. Dents, tears and scratches will significantly reduce a collector's first impression of your car and will affect the rest of his attitude. So, if the stainless on your car needs work, have it done. Don't let a first impression take thousands of dollars off the value of your investment.

Leather Seats–When a collector looks over your car, the second area he'll investigate will be its interior.

If your seats are cracked and torn, it's well worth the money to have the covers replaced. Once you do, be sure to keep a preservative on them at all times.

The Dash Area–If your car's dash area is cracked or faded, it's a good chance it can be fixed without replacing the whole unit. Once it's fixed, use a sunshade on your windshield whenever the car is parked outdoors. Even if it isn't sunny.

Three new programs.

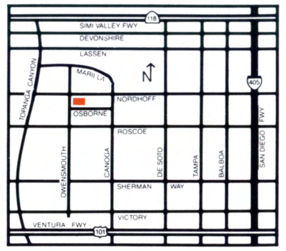
Last year, we introduced three new programs for owners who are interested in upgrading the value of their cars.

First is our Concours DeLorean™ appraisal plan. Second, our assurance plan which allows you to upgrade your car gradually within your budget.

Third, is our nationwide pick-up service. Now we can pick up your car, anywhere in the country, and bring it back to one of our service centers in an enclosed trailer.

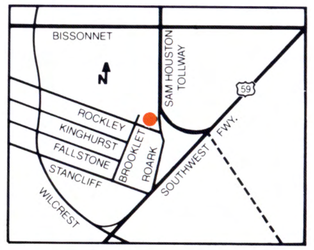
- All DeLorean parts and accessories shipped anywhere in the world
- Two complete service centers

Our out-of-state, 24 hour, toll-free phone numbers: (800) DMC-HELP or (800) USA-DMC1
International FAX (818) 998-6381



California

9006 Owensmouth Avenue
Canoga Park, California 91304
In California, call (818) 341-1796

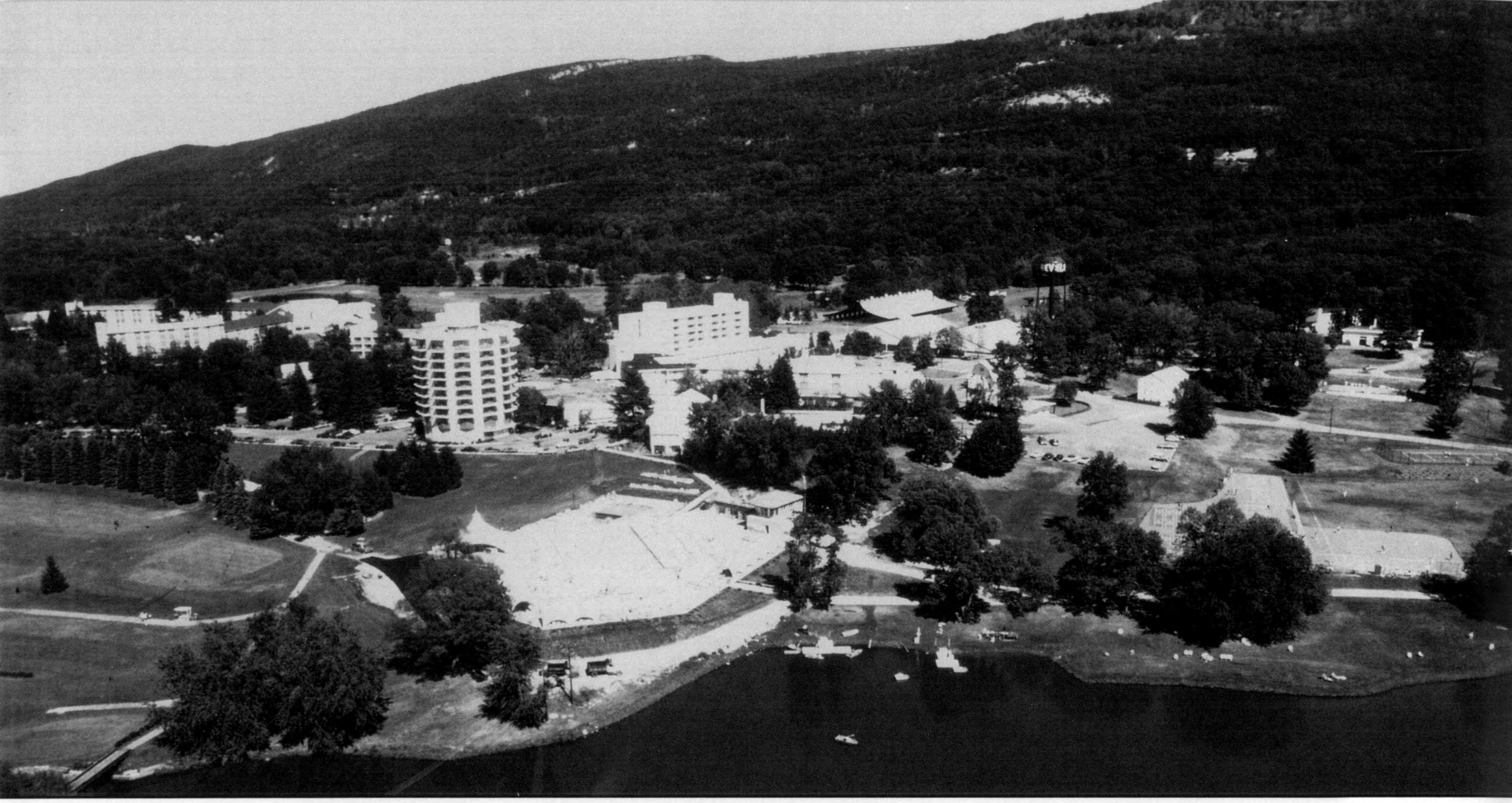


Texas

10804 Roark Road
Houston, Texas 77099
In Texas, call (713) 568-9573

VISA MasterCard AMERICAN EXPRESS Card DISCOVER

DELOREAN ONE



YOU ARE INVITED TO THE

EASTERN REGIONAL RUN II

AT THE BEAUTIFUL NEVELE RESORT

Mark Your Calendar...
April 26, 27 and 28, 1991!

Chapter 35 is hosting a magnificent, three day weekend event at the world-class NEVELE RESORT in Ellenville, New York to commemorate the 10th anniversary of the birth of the DeLorean.

Nevele is nestled in the picturesque Catskill mountains, only two hours from New York City.

Its grounds include a PGA championship golf course, indoor/outdoor swimming complex, fitness center, tennis courts, lake for boating, racquetball courts, horseback riding, miniature golf course and acres of wooded hiking trails.

The weekend package will include all meals, road rallye, tech seminar, cocktail parties, 9 hole golf tournament (extra charge & weather permitting), evening entertainment and much, much more.

Invitations will be sent to all members in New England, New York, New Jersey, Pennsylvania, Delaware, Maryland and Virginia. If you live in another state and would like to participate, call Gail Geraldi (914)429-0121 or fill out and mail the coupon below and enclose your check.

RESERVE EARLY–Limited Space Available

(Room Reservations given on a first come first serve basis).

DELOREAN OWNERS ASSOCIATION
CHAPTER 35

FOR RESERVATIONS

Fill out and mail the coupon along with your check (payable to Charles Geraldi, Treasurer) To:

Gail Geraldi, Chapter Coordinator
14 Elm Drive, Stony Point, NY 10980

Name ____________________

Number of persons ____________________

Address ____________________

City/State/Zip ____________________

Day Phone ____________________

☐ *Single-weekend package rate is $210.00 (Double Occupancy required)*

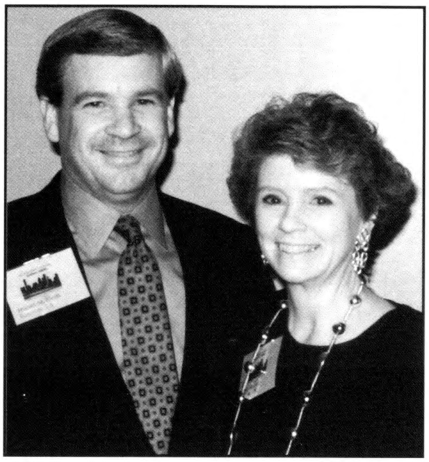
☐ *Couple-weekend package rate is $420.00*

Weekend Package Rate includes: room, six meals, gratuities, rallye pins and T-shirts (tax not included)

For child rates call: (914)429-0121

JUBILEE *(FROM PAGE 13)*

Joe and Mary Ruth White, Jubilee Activities Directors.



Harold and Karen McElraft, Chapter 9 Coordinators.

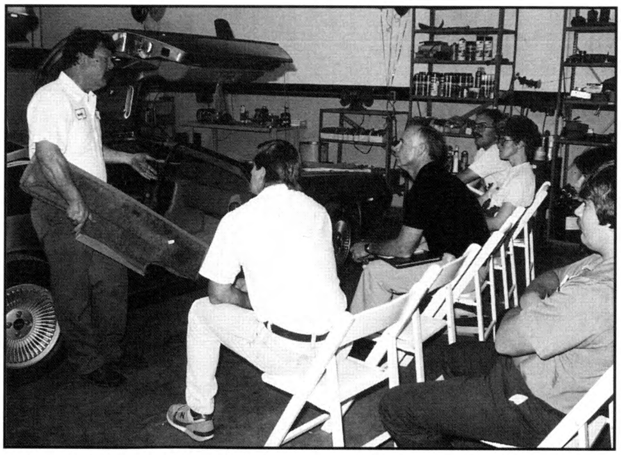
jacket; car cleaning kits from Harold McElraft; and a 5 pound bag of peanuts.

Harold McElraft, Chapter 9 Coordinator, greeted our visitors and we were happy to have so many of our national Directors attending from California, as well as many out of state guests; Jack Skeens from Arkansas, Jim and Janet Landry from Louisiana, Jim Dale from Missouri, Eric and Cathy Endy from Nevada, Joseph and Linda Modifica, and Eleanor Rogers and Fred Munro from New York. John and Terri Hatton from Oklahoma, and many from the state of Texas.

The Concours was officiated by Dorothy Bradley, National Concours Chairman assisted by local Houston judges,enthusiastic car buffs. Saturday dawned clear, cool and bright. Sunrise found some eager owners busily prepping their cars in front of Lovett Hall, completed in 1912 and the oldest building on the Rice University campus. This was the site of the 1990 International Economic Summit Conference.

When the three-minute warning was issued ("Rags down in 3 minutes!") a veritable frenzy of touching up occured. Since four of the cars were trailered to the Concours, there is credible evidence some owners take this Concours business very seriously. There were three classes of competition; five cars were in the 1981 class, 2 in the 1982 class, and five in the Frequently Driven (People's Choice) class. The new designation of "Frequently Driven" was introduced to apply to cars with 35,000 or more miles and/or modifications. This category was a natural result of the feeling we all have that this is an immensely enjoyable, driveable car and we think it should be recognized as such.

After the Concours, we drove out to DeLorean One who donated their facility for the tech seminar, and a lovely lunch hosted by Elaine Wynne, and Susan and Millie Bernstein. The seminar was conducted in 4 sections with each containing ten participants: Headliners by Warren Wallingford, Detailing by Millie Bernstein, General Engine Maintenance by Stephen Wynne, and Air Conditioning and Mode Control by Ed Bernstein. The in-shop hands-on approach for this seminar was a hit. Chapter 9 appreciates the generosity and goodwill of this facility.



Tech talk with Warren Wallingford.

After the tech seminar, we all had time to enjoy the museums on either side of the Wyndham Warwick. Some of us just crashed before our evening of dining and dancing in the Grand Ballroom.

At the evening cocktail party and dinner dance at the LaFontaine Ballroom, we enjoyed dance band music of the Captions, a most excellent, widely known local group with a mixed repertoire that appealed to all ages and agilities.

The tables were decorated with silk blue-bonnet flower arrangements. Seventy members attended the black tie optional dinner. Our attire for the evening ran the gamut from casual to formal and everyone enjoyed the relaxed atmosphere that is so prized in our southern hospitality. Dorothy Bradley awarded the Concours plaques to the winners:

1981 CLASS
  Jeff Werle-1st Place
  James Smith-2nd Place
  Augustin Tinoco-3rd Place
1982 CLASS:
  Mary Ruth White-1st Place
  John Hatton-2nd Place
  No 3rd Place awarded
FREQUENTLY DRIVEN:
  Chip Story-1st Place
  Harold McElraft-2nd Place
  Jim Dale-3rd Place

Harold McElraft gave a warm welcome to our guests and Mary Lou Knudson, National Activities Director and Kjell Myhre emphasized the importance of chapter activities and participation.

The raffle produced a host of winners: Kay Myhre, the gold DeLorean pendant and Eleanor Rogers, the official DeLorean Owners Association jacket, for a couple. The raffle must have been successful. Would you believe we

CONTINUED ON PAGE 26

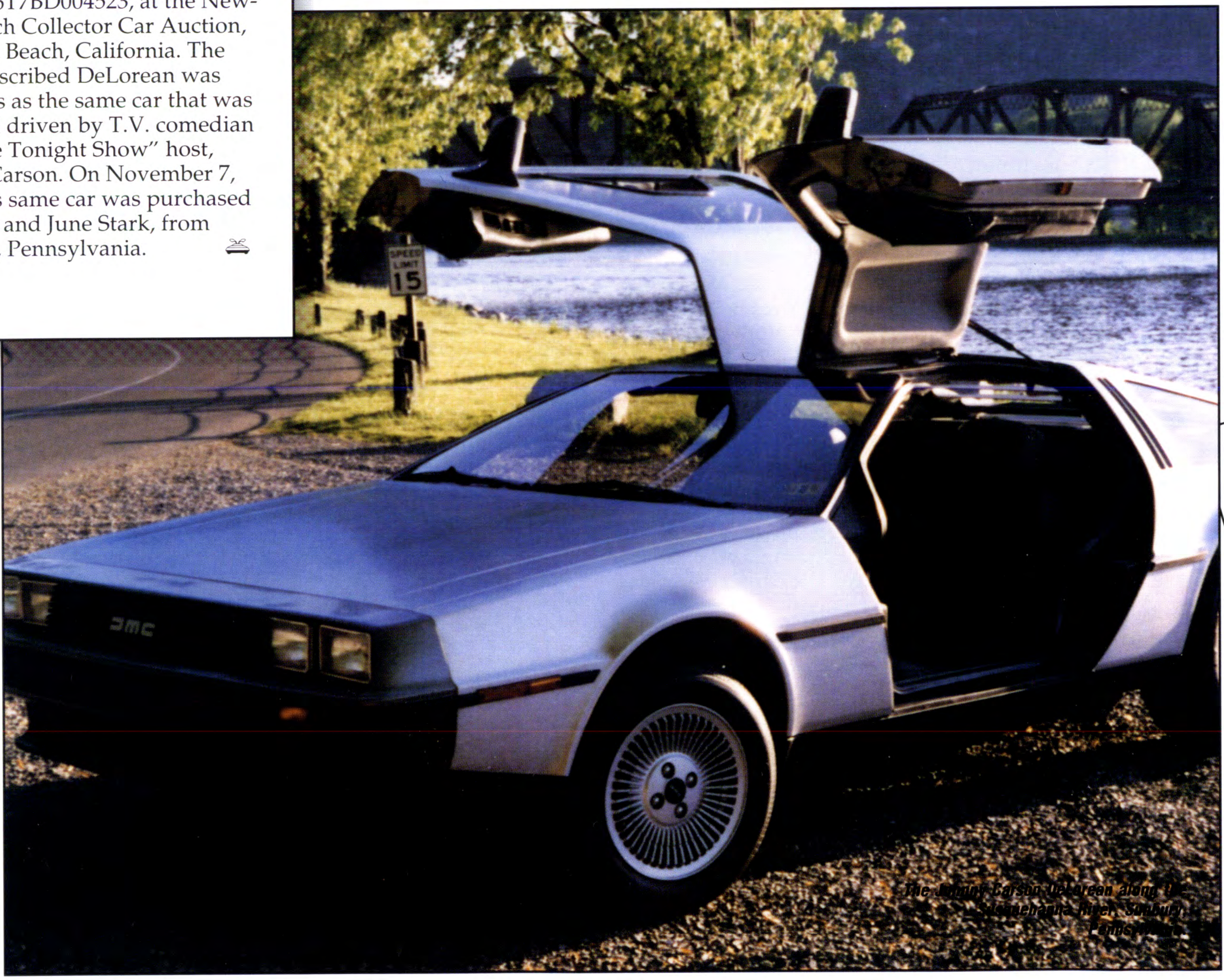
THE JOHNNY CARSON DELOREAN

BY KERRY STARK

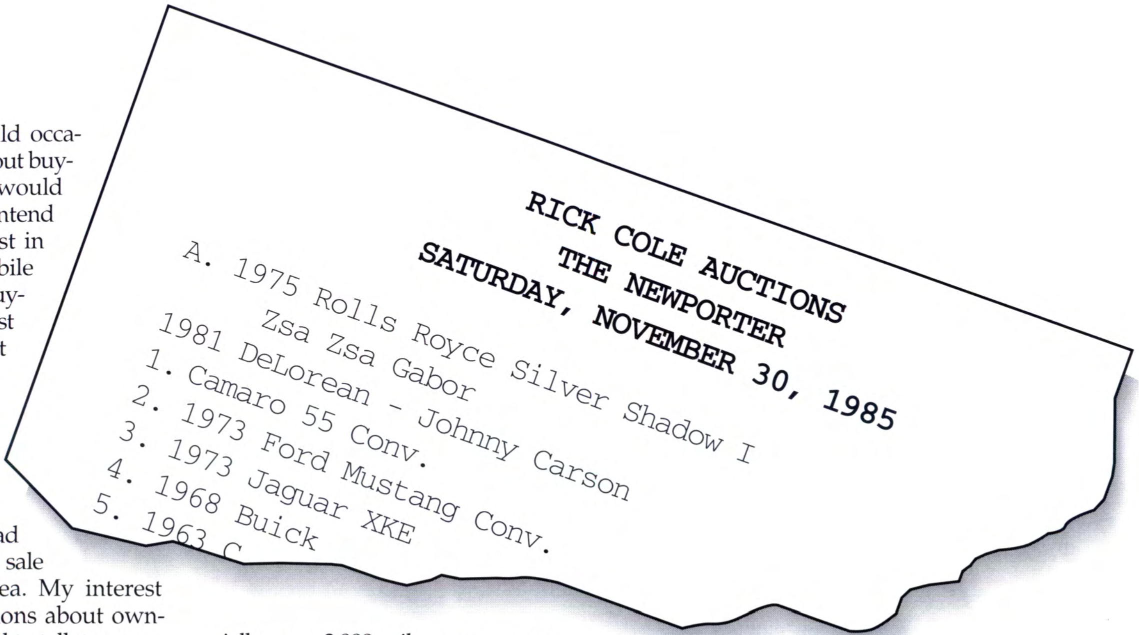
November 7, 1988
Mr. and Mrs. Larry H. Wiggins
Box 310
Carpinteria, CA 93013

To Whom It May Concern:

We, Mr. and Mrs. Larry H. Wiggins, do confirm and swear that on Saturday, November 30, 1985, we did purchase a 1981 DeLorean, VIN # SCEDT26T7BD004523, at the Newport Beach Collector Car Auction, Newport Beach, California. The above described DeLorean was sold to us as the same car that was used and driven by T.V. comedian and "The Tonight Show" host, Johnny Carson. On November 7, 1988, this same car was purchased by Kerry and June Stark, from Sunbury, Pennsylvania.



The Johnny Carson DeLorean along the Susquehanna River, Sunbury, Pennsylvania.



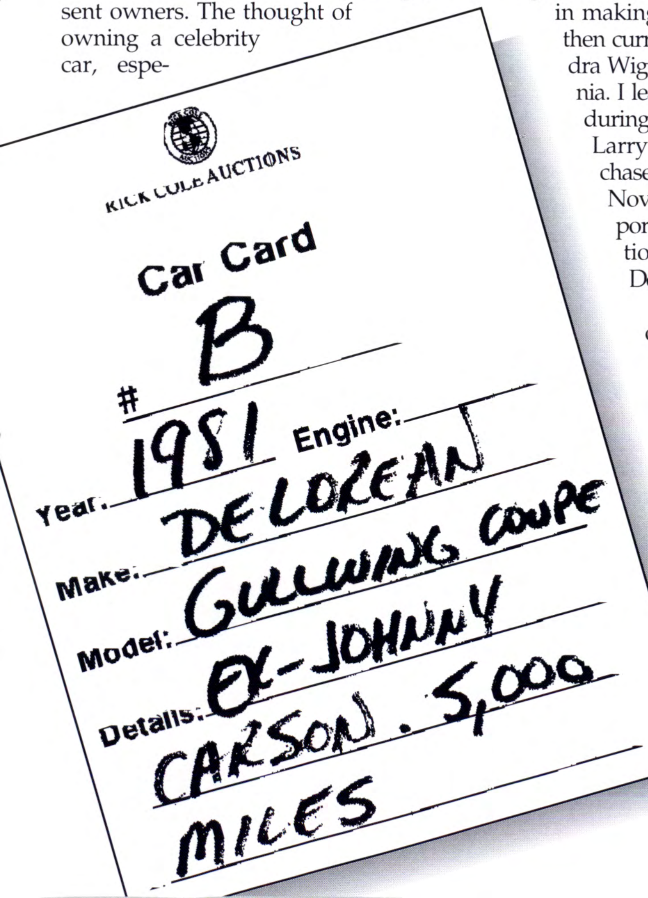
RICK COLE AUCTIONS
THE NEWPORTER
SATURDAY, NOVEMBER 30, 1985

A. 1975 Rolls Royce Silver Shadow I
Zsa Zsa Gabor
1981 DeLorean - Johnny Carson
1. Camaro 55 Conv.
2. 1973 Ford Mustang Conv.
3. 1973 Jaguar XKE
4. 1968 Buick
5. 1963 C

My wife, June, would occasionally joke with me about buying a DeLorean. She would never admit it, but I contend it was her initial interest in the DeLorean automobile that led me to consider buying a DeLorean in the first place. Something about the car caught her eye.

Some time later, I spotted a DeLorean for sale in the local newspaper. I called. We initially contacted a prospective seller who had advertised a nice '83 for sale in the Philadelphia area. My interest prompted many questions about owning a DeLorean. I wanted to talk to someone who knew DeLoreans. What better place to start, I thought, than the DeLorean Owners Association, which led to my first pleasant telephone contact with Mr. John Truscott, National Membership Chairman.

John was most helpful as my initial information resource which intensified my interest in buying a DeLorean for an investment and fun alike. He informed me about the famous Johnny Carson DeLorean which was up for sale by the present owners. The thought of owning a celebrity car, especially a car 3,000 miles away, went in one ear and out the other. After our conversation, I decided to continue my search for the right car.



RICK COLE AUCTIONS

Car Card

# B

Year: 1981 Engine:

Make: DELOREAN

Model: GULLWING COUPE

Details: EX-JOHNNY CARSON. 5,000 MILES

For the next several days, I could not stop thinking about what it would be like to own a famous car like the Johnny Carson DeLorean. I brought the subject up to my wife numerous times , hoping she would convince me to pursue more specifics about the celebrity DeLorean. She eventually urged me to call John Truscott again for more information. He assisted in making my first contact with the then current owners, Larry and Sandra Wiggins of Carpenteria, California. I learned the history of this car during my first conversation with Larry Wiggins. It was first purchased by the Wiggins family on November 30, 1985, at the Newport Beach Collector Car Auction after it was seized by DeLorean bankruptcy trustees.

Johnny Carson, as an original investor in the company, was given the DeLorean, VIN #SCED TZ6T 7BD 004 523, to use and drive for promotional purposes. It was reported that Carson invested half a million dollars in the company. However, the car was never transferred to Johnny Carson, and the title remained with the DeLorean Motor Company.

In the process, I collected all necessary proof, articles, and documentation to verify the history and authenticity of this particular automobile.

I purchased the Johnny Carson DeLorean literally over the telephone. The next several weeks were devoted to making and executing logistics in the trek from Pennsylvania to California and back...with our new "stainless steel illusion".

We were the new proud owners of the Johnny Carson DeLorean, a piece of automotive history.

My wife and I flew to the Los Angeles International Airport on November 7, 1988. We made the necessary arrangements to obtain a U-Haul truck and auto trailer, then proceeded north to Carpenteria arriving after dark. We literally bought the car while holding a flashlight, looking it over as best we could.

Reality set in. We just bought one of the most famous, talked about DeLoreans in existence. It was now our responsibility to get it home safely. My work schedule allowed me five days, leaving only four days to make the trip home.

We started Tuesday morning after an

CONTINUED ON PAGE 25

CARSON CAR

(FROM PAGE 19)

Carpinteria Herald • Tuesday, December 10, 1985

THE WIGGINS FELT JOHNNY CARSON'S DELOREAN WAS A REAL BARGAIN

When Larry and Sandra Wiggins moved to Carpinteria from Alaska in 1982 people asked them what they were going to grow in their newly acquired five-acre orchard. Paul Wiggins said cars.

He wasn't kidding. Wiggins, who owns the Wiggins Oil Tool Company in Ventura, has been collecting classic cars for several years. On Saturday, November 30 the Wiggins went to the 17th Newport Beach Collector Car Auction with the intention of adding to their already impressive collection of classic Thunderbirds. They didn't know that Johnny Carson's stainless steel DeLorean car, which had been the butt of many jokes in Carson's monologues, was going to be auctioned off that day. And even if they had known, they probably wouldn't have been interested. DeLoreans had previously been auctioned off at astronomical prices, generally in the $30,000 price bracket.

"I thought it would sell for about $36,000," Wiggins said. "Being Johnny Carson's car I thought it would go even higher than previous auctions."

It didn't. The bidding was surprisingly low. The Wiggins' had looked the car over before the bidding started and decided they might go as high as $20,000. They didn't have to go quite that far.

"Most of the people bidding were dealers," Sandra Wiggins said. "We upped the bids several times, and I guess they saw we weren't going to give up."

The DeLorean was theirs for $18,250.

The Wiggins' found themselves minor celebrities. The purchase was written up in the Los Angeles Times the following Monday and made the front page of U.S.A. Today. Since they've gotten home they've received six phone calls from people around the country who are willing to buy the car for more than they paid for it. More unaccountably, since the purchase, they've received some calls from people with the last name of Wiggins who want to know if Wiggins sells a tee shirt with his name on it. Also, without even applying, the Wiggins almost immediately received in the mail a membership in the DeLorean Owners' Association, an international organization which happens to be headquartered in nearby Santa Barbara.

Wiggins has no intention of doing anything with his DeLorean for the moment except enjoy it.

"I will possibly sell it later on but I'd like to keep it at least a while to have the novelty of it," he said. "I won't drive it around. It's only got 5,000 miles on it. I didn't even drive it home. I trucked it here."

Wiggins feels his particular DeLorean is a gem.

"The auctioneer said this was the most famous DeLorean ever made because Carson was constantly making jokes about it," he said. "It's also more plush, has better leather and has more gadgets than other DeLoreans. The DeLorean is the only stainless steel car I know ever made that doesn't rust. I think it's years ahead of other manufacturers' cars. I think DeLorean was one great car manufacturer."

Wiggins' auto orchard includes several other choice crops. He has five Thunderbirds, a 1976 Cadillac convertible, which is the last convertible ever made, a 1955 Cadillac, a 1965 Oldsmobile convertible, a 1961 Lincoln, a 1937 Chevrolet truck, a 1957 Hudson and a 1969 Plymouth Roadrunner. Wiggins has been collecting since 1976. He also finds room to grow avocadoes, tangerines and oranges on his property.

The Wiggins' lived in Anchorage, Alaska for 22 years, where Wiggins ran the Casing Tong Service Company. They bought their current property in Carpinteria in 1981 and moved here in 1982.

"I always wanted to get to the sunshine state," Wiggins said. "I worked here for a year in 1962 and I loved the state. Carpinteria is one of the finest places I've ever seen."

"We like the fact that it's a small town," Sandra Wiggins said. "It's beautiful, peaceful and pleasant."

The Wiggins' have three daughters. Theresa, 27, lives in San Diego; Tina, 17, goes to school in Phoenix, Arizona, and Cindy, 26, works for IBM in Anchorage, Alaska.

The Quarterly • Vol.6, No. 1, First Quarter, 1986

MARCH 22-23 AUCTION...

Los Angeles Sale Will Kickoff '86 Collector Car Marketplace

Rebounding from our outstanding success last March (1985), Rick Cole Auctions is proud to announce our continued association with the Sheraton-Universal Hotel, and another collector car auction at that location. The classic sale is scheduled for March 22-23, 1986.

Those who attended the sale last year saw the best consignment auction in California history. Our 300 car limit was reached early on, and subsequently, 315 autos crossed the block for an amazing $1.45 million figure. One of the highest sale averages ever was attained on the Sunday sale day, as 67% of the cars sold! This is an interesting statistic when consigning your car, as Saturday is usually the more popular day.

Phones in our office start ringing immediately after our November Newport Auction for consignment requests for the March dates. Over 100 inquiries had been logged prior to the first auction ads!

Plan to spend the weekend with us once again this March, as we present the only, major collector car auction in the Los Angeles Area. Be sure to get your car(s) entered soon, so you won't be left out.

THIS CAR FOR SHOW, NOT FOR DRIVING

BY DAWN CAPEWELL, staff reporter

The Daily Item
Sunbury, PA
Thursday, January 19, 1989

Kerry Stark, a police officer for the City of Sunbury, poses in his DeLorean. Stark recently bought the car and brought it back from California. The car once belonged to Johnny Carson.

Sunbury — Kerry Stark of Sunbury recently drove 3,000 miles to cart home a $25,000 piece of stainless steel, testament to the failed enterprise of a maverick automaker.

Stark didn't even consider driving his new treasure — a 1981 DeLorean automobile — back home. Instead, he and his wife, Joan, hauled the car home with a U-haul truck and trailer.

"A DeLorean is not a car for racking up miles on," Stark said. "It's more of a car for showing, polishing, and gloating over, especially since one of its previous owners was Johnny Carson."

"The appearance certainly impresses me," he added. "I really love the way the car looks. The fact that a celebrity owned it makes me love it a little more."

Carson lost the car when John Z. DeLorean's company went bankrupt and bankruptcy trustees seized the automobile, according to John F. Truscott, membership chairman for the DeLorean Owners Association in Santa Barbara, Calif.

Carson was given the car by the DeLorean company for making a $500,000 investment in the car company, but the car's title listed its owner as the DeLorean factory, not Carson or John DeLorean himself, Truscott said.

As a result, when the factory went bankrupt, Carson was forced to forfeit the car, receiving only $425 for tires he installed on it, according to a Nov. 25, 1985 article in Auto Week.

The car was sold in 1985 at the Newport Beach Collector Car Auction in Newport Beach, Calif., to Larry and Sandra Wiggins for $18,250, according to newspaper accounts.

Truscott said the value of a 1981 DeLorean now ranges from $7,000 to $25,000, depending on the car's condition and mileage, and the circumstances of the sale. He said the celebrity status of the car doesn't necessarily make it more valuable.

Truscott added that he expects the value of the 9,000 DeLoreans produced before the company went bankrupt to escalate in the next several years. He estimated that 75 percent of the cars are still held by private owners, but said that percentage is dwindling and the value of the cars is concurrently escalating.

The price is driven up as the cars are destroyed in accidents and snapped up by movie studios, he said. Universal Studios bought five DeLoreans to make the movie "Back To The Future," Truscott added.

Stark's DeLorean is graced with a stainless steel exterior, gull wing doors, and lots of history. It has traversed through the hands of three owners, almost more owners than it has covered in miles on the road. The car is seven years old and has only 6,000 miles on it, Stark said.

The car has a dull finish — no shiny chrome or flashy pipes, just sleek craftmanship.

The car is Stark's new plaything, for use when he's not on duty as a Sunbury police corporal. Stark said he usually doesn't tell people that he bought Johnny Carson's DeLorean.

"I'm kind of low-key about it," said Stark, who nevertheless admits that he plans to show the beauty off in shopping malls. He said he has inquired at the Lycoming and Susquehanna Valley malls about showing it.

Don't worry, Stark said, the city does not pay him enough to finance the purchase of the DeLorean, which cost him in the neighborhood of $25,000.

He also owns a business called Starkrest Fencing in Sunbury that he said turned a neat profit last year.

Stark said that while buying a DeLorean is not the most profitable way to invest one's money, it is one of the most enjoyable.

"You could probably make more by investing your money, but then you can't take money out of the garage and play

CONTINUED ON PAGE 27

DELOREAN EXPO 91

SEPT. 26-29, 1991
TROPICANA RESORT
LAS VEGAS

YOU'RE INVITED

to the party of the decade

BY MARY LOU KNUDSON, National Activities Director

Mary Lou Knudson, National Activities Director.

I've enjoyed meeting so many of you at National and Regional events the last few years that I feel like I'm writing a letter to old friends.

We've had such good times together at Niagara Falls, Lake of the Ozarks, Monterey, Lake Tahoe, Houston and Cape Cod and I have so many wonderful memories. Like the time in Niagara Falls when a honeymooning couple who owned a DeLorean followed several of our members to the hotel, joined the Association and attended the remaining activities. And the beautiful autumn colors as we drove through the quaint villages on Cape Cod.

The Expo '89 on Cape Cod was the triumphant result of a very concerted effort by your Board of Directors to present the most spectacular event to date. Well over 200 attended.

1990 was then turned over entirely to regional chapters so that they could put on regional events that would help them build their membership base. As a result, many of the chapters produced some real winners.

Whether it be regional or national, the goal of these events is twofold. To bring DeLorean owners together, all of whom have a common bond, for friendship as well as the dissemination of technical knowledge.

The other day, a member wrote me and said he wasn't interested in coming to events and socializing. He just wanted technical information. What better way is there to gain knowledge of our unique automobiles than to gather together in a hands-on situation and discuss them with experts and other owners? All the tech manuals in the world can't come even close.

Well, although the national Board did not produce an event in 1990, we have been putting a lot of time into planning the Expo '91 in Las Vegas this September. It seems that every event that we've sponsored or attended, we've picked up more and more good ideas.

To tell you simply that the Expo '91 will be the biggest and best event to date would be an understatement. I know it will be the biggest by far for four reasons. Las Vegas has always proven to be a huge drawing card for us. Rates are very reasonable. The Tropicana is a top notch facility. And many people have contacted me already letting me know that they're coming.

It will be the best because I know what's on the drawing boards and it's incredible.

In closing, I just want to say mark your calendar now September 26-29, so you won't miss the party of the decade.

MORE ACTIVITIES PAGE 26

JUBILEE

(FROM PAGE 17)

ran out of raffle tickets? Neither could we, but run out we did.

In honor of Phyllis Balderston's birthday, the band played "As Time Goes By", and Jack and Phyllis Balderston led off with the first dance. Some seemed to enjoy the dancing more than others. James and Susan Langabeer, John Peterson and Cheryl Carpenter, Bob and Barbara Wells all seemed to have had a ball. (Was that the Texas 2-Step?).

The Rallye got under way at 9:30 AM Sunday morning in the Rose Garden in nearby Hermann Park. Our Rallye was put together by Keith and Jerry Calloway and they did a splendid job of routing us through some of the most beautiful parks, neighborhoods, and freeways in Houston. This was a poker rallye and a special thanks goes to all who helped at the card stations: Susan Bernstein at the Arboretum in Memorial Park, Jerry Calloway at George R. Brown Convention Center, and all three, at Vargo's Restaurant. The rallye ended at the beautifully shady, secluded, exclusive, urban idyllic setting of Vargo's with 22 DeLoreans decorating the parking lots along the historic branch of Buffalo Bayou. The Rallye winners: 1st Place - Tom Dennis, 2nd Place - Harold McElraft, and 3rd Place - Chip Story. After a delicious lunch and presentation of Rallye awards at Vargo's, reluctant farewells were said and we all were thinking of our next event.

Chapter 9 wishes to thank all who by their attendance made this event the grand success that it was. Many hours were put in by Chapter 9 members to make this event memorable and there is no arguing with success. Thanks again to all!

"When You Need A Part For Your DeLorean, Do You Know How To Identify It And Its Number • When You Or Your Mechanic Need To Repair Your DeLorean, Are You Sure Of The Procedure • Do You Know Which Parts Have Been Recalled Or Discontinued • Have All The Safety Campaigns Been Completed On Your DeLorean • How Much Was That Part Supposed To Cost • ?"

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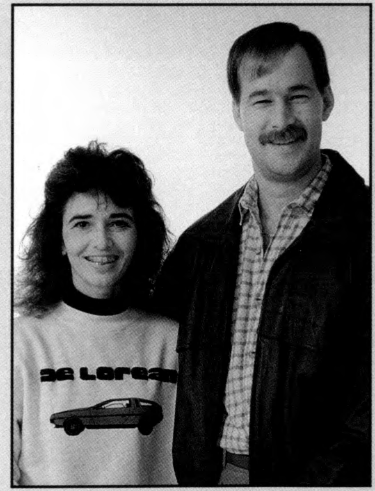
CARSON CAR *(FROM PAGE 19)*

overnight visit with my sister and her husband in Riverside, California. We drove practically non-stop, taking turns driving. We arrived home in Sunbury, Pennsylvania with car intact. We brought our pride and joy DeLorean cross country without a scratch. We agreed, despite discomforts and extra expenses, it was well worth it. We were the new proud owners of the Johnny Carson DeLorean, a piece of automotive history.

Something about the car caught her eye.



About the Author

Kerry Stark lives in Sunbury, PA with his wife June, and two daughters. He has been employed as a city police officer for the past sixteen years and is also the owner and operator of a fence company. They are looking forward to buying their second DeLorean.

USA Today
Monday, December 2, 1985

WHEELS OF FORTUNE:

The world's most-maligned automobile, Johnny Carson's 1981 DeLorean, has a new owner. The car sold for $18,250 at the Newport Beach Collector Car Auction in California this weekend. Tool company owner Larry Wiggins bought the car that brought Carson, a $500,000 investor in the DeLorean Motor Co., little fortune but considerable laughs in his monologues. The car, valued at $25,000 new, has a current market value of $15,000. Zsa Zsa Gabor also sold her 1975 blue Rolls-Royce Silver Shadow for $23,500.

Los Angeles Times
Friday, November 8, 1985

ON CIRCUIT:

Like a star — That '81 DeLorean that Johnny Carson has made the subject of many a late-night monologue gets the chance to be owned by someone else this month. The stainless-steel car (which an auction house spokesman said Carson had for promotional use) will get auctioned off by Studio City's Rick Cole at the Newport Beach Collector Car Auction the weekend of Nov. 30.

Santa Barbara, CA News-Press
Sunday, December 1, 1985

CARPINTERIA MAN WINS BID FOR CARSON-USED DELOREAN

Newport Beach, Calif. (AP) — Larry Wiggins, an oil tool company owner from Carpinteria, paid $18,250 for a 1981 DeLorean sports car once used by Johnny Carson during the 17th Newport Beach Collector Car Auction on Saturday.

The stainless steel DeLorean and Zsa Zsa Gabor's 1975 Rolls-Royce Silver Shadow were two of the collectibles auctioned off, auction spokesman Joseph Molina said.

The sports car was loaned to Carson for promotional purposes after the entertainer invested nearly $500,000 in the DeLorean Motor Co., Molina said. The vehicle was repossessed by bankruptcy trustees liquidating the car company.

"I think it will be an interesting antique," Wiggins said.

A standard DeLorean sells for about $14,000. Last year, two DeLorean prototypes were auctioned off for a total of $58,000, Molina said.

Also auctioned off was Miss Gabor's 1975 Silver Shadow, which brought $23,500 from Mr. and Mrs. Conrad Haythorne of Orange, Molina said.

Some 400 cars were to cross the block by today, the end of the two day, biannual auction at the Newporter Resort Hotel.

The San Diego Union
Monday, December 2, 1985

FUN, FUN, FUN

Johnny Carson's 1981 DeLorean sports coupe, which the comedian frequently joked about on his "Tonight Show", was sold at an auction Saturday for $18,250. Larry Wiggins of Carpinteria bought the car — which was valued at $25,000 when new and would have a current market value of about $15,000 except for its celebrity owner — at the Newport Beach

Membership Challenge Results

On Sunday, February 3rd, the Board of Directors met and the Membership Challenge Committee presented the names of those members who had entered and were eligible for the contest.

Ten members were eligible. Two of these contestants brought in two new members each, and eight brought in one each.

Fifteen other members informed us that they had talked to or given brochures to prospective new members but none of these prospects responded, or if they did, they did not indicate that they had been referred by anyone.

The names of the two members who had brought in two new members were put in a bowl, and blind drawn by Thom Watkins, a member but not a Director. The name drawn won first place, the remaining name won second.

Then, the remaining eight names were put in the bowl and the third and fourth place winners were blind drawn by Watkins in that order.

The remaining six contestants will receive $10 off their upcoming dues. All have been notified by mail.

Results were as follows:

1. Dean & Janet Kimball; Walnut Creek, CA - First Prize
2. Ray Locke; Salem, OR - Second Prize
3. Charles Campbell; Idaho Falls, ID - Third Prize
4. David & Martha Johanson; Pensacola Beach, FL - Fourth Prize
5. $10 off winners:
   Arthur Cameron; Belmont, MA
   Dana & Judi Haglin; Boulder, CO
   David & Linda Colley; Wayland, OH
   Guy & Linda Avellon; N. Olmsted, OH
   Custom Auto Tech; Lake Worth, FL
   Robert Deck; Portland, OR

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CARSON CAR • NOT FOR SALE

(FROM PAGE 21)

with it," Stark joked.

The car has about the same amount of power as a Corvette, he said. It gets only about 20 miles a gallon, has a V-6 Volvo fuel-injected, 135-cubic-inch engine, and is completely encased in stainless steel. Even the bottom of the car is 90 percent stainless steel.

The engine is in the back, so there are no tailpipes to hang down. Underneath the stainless steel is a fiberglass shell and lots of padding. The car weighs a light 2,500 pounds, Truscott said.

"The car is a mechanical marvel. I could go on for hours about features he (DeLorean) built into the car, Truscott said.

The car will flip over if it rolls on its side because the rear wheels are one-inch larger than the front wheels. If the car rolls, the rear wheels will grip the pavement and flip the car back over.

Also, the car has an impact switch behind the left front wheel that shuts off the circuit to the fuel pump and unlocks the electric doorlocks when the car crashes. That way, the car stops running and the doors open so the accident victims can be easily rescued.

Truscott said the car produces very little air pollution. He said he recently had his 1983 DeLorean tested for emissions, and the car registered no emissions reading.

"If you wanted to commit suicide by running the car in the garage with the door shut, you wouldn't make it if your car is a DeLorean," Truscott said.

Stark said he was first intrigued by the idea of owning a DeLorean when his wife began reading books about the DeLorean story, and the demise of his business. Stark said he began watching the auto sales listing for DeLoreans and other exotic cars, but only found one DeLorean for sale in Danville. Finally, he called the DeLorean Owners Association to find other cars for sale, and learned that the Carson DeLorean was up for sale.

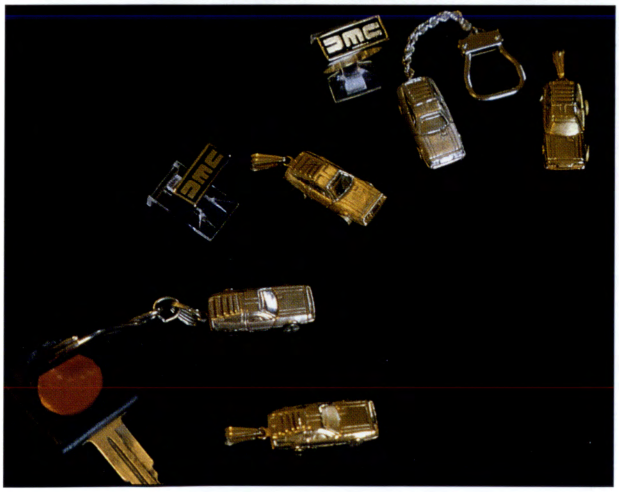
"That went in one ear and out the other because the car was in California, but then I started thinking maybe it would be possible, and I started making arrangements for the trip," Stark said.

Los Angeles Times
Monday, December 2, 1985

THE NEWS IN BRIEF

Johnny Carson's 1981 DeLorean sports car and Zsa Zsa Gabor's 1975 Rolls-Royce Silver Shadow were two of the collectibles auctioned off in the 17th Newport Beach Collector Car Auction. Larry Wiggins, an oil tool company owner from Carpinteria, paid $18,250 for the stainless steel DeLorean, auction spokesman Joseph Molina said. Also auctioned was Gabor's blue Silver Shadow, which brought $23,500 from Mr. and Mrs. Conrad S. Haythorne of Orange, Molina said.

DeLorean Gold



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DELOREAN FUEL INJECTION SYSTEM

BY MARK HERSHEY

The fuel injection system chosen for the DeLorean was developed by West Germany's Robert Bosch company as a low-cost alternative to their elaborate, computer-controlled L-Jetronic system. First introduced in 1973, the DeLorean's K-Jetronic is an entirely mechanical system which has proven reliable enough to be selected for such premier automobiles as the 1977-79 BMW 320i, various Mercedes-Benz 280, 450, 380 and 500-series models from 1976 through 1985, and 1973-88 911, 911 Carrera and 911 and 924 Turbo models from Porsche. K-Jet is also found on various Volkswagen models, and most Volvo 4 and 6-cylinder models from 1974 through 1986. Curiously, it was not used on Renault and Peugeot models that share the DeLorean's PRV V-6 engine.

Strictly speaking, the system uses no electronics to perform its primary function of creating a proper air/fuel mixture, although two adjunct systems also found on the DeLorean use electronics to maintain a constant idle speed and to compute minor adjustments to the fuel/air ratio to improve emission specifications. These systems are called the Constant Idle System and the Lambda system, respectively.

This article describes operation of the K-Jetronic system and some of the standard tests that any qualified K-Jet repair center will perform on the system should service become necessary. Subsequent articles will cover the Constant Idle and Lambda systems in more detail.

FUEL INJECTION HISTORY

Fuel injection is not a new technology. As early as 1887, fuel injection systems were available on commercial stationary engines produced by the Charter Gas Engine Company of Sterling, Illinois. Considering that the carburetor was not considered mature until about 1905, this was a remarkable achievement that went largely unnoticed at the time. Several other companies produced similar systems for specific applications (generally not automotive), but it was not until about 1936 that engineers with Mercedes-Benz began testing single cylinders "engines" based on the geometry of their Grand Prix racing engines with an eye toward future automotive applications.

By the end of World War II Mercedes-Benz and Bosch realized that they possessed key elements of an exciting new technology, and, along with other independent developers, began the research that led to the creation of mass-produced injection systems. Famous names like Rochester Carburetors, Lucas Electric, Bendix and Bosch developed competitive systems in the early 1950's for Formula One racers, but it was not until 1957 that an American car company introduced fuel injection in a production car — the 1957 Corvette from Chevrolet, and a virtually identical system for the 1957 Pontiac Bonneville. Both Chevrolet and Pontiac dropped fuel injections by 1959, due mostly from field service problems.

About the same time, American Bosch (at the time part of Germany's giant Robert Bosch conglomerate but later to become a part of United Technologies) developed a mechanical high-pressure injection system that appeared in the racing circuits, as did Kugelfischer of Germany (later taken over by Bosch in 1974) and America's Bendix Corporation. Bendix, in the late 60's' modified one of their aircraft engine designs (dubbed the RS-II) which by 1971 appeared on 32 of the 33 cars qualified to start that year at Indianapolis Speedway.

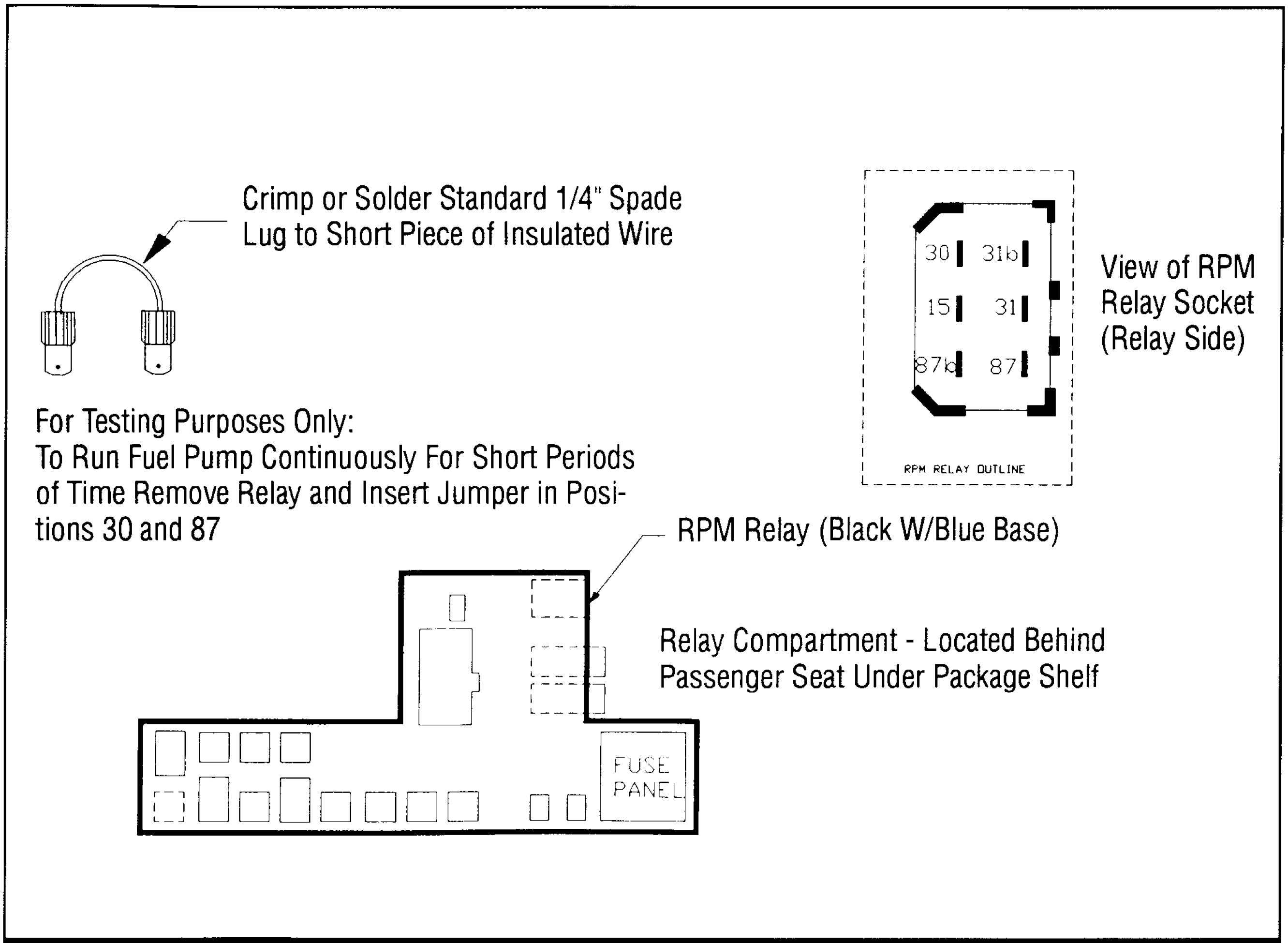
While the Americans were disillusioned with fuel injection systems, Bosch continued development of commercial systems and had some success in placing injection systems in Mercedes-Benz autos as early as the mid-Forties. It was not until 1951 that they developed the injection nozzle that has become the basis for all subsequent high-pressure injection systems. That other gullwing automobile, the Mercedes-Benz 300 SL, had a prototype fuel injection system in two racing models in 1952. Production model 300 Sls had a Bosch-developed system on the 1954-55 models.

Prior to 1957 all fuel injections were mechanical. The first electronic system was announced by the Eclipse Machine division of the Bendix Corporation, a practical version of which was finally patented on April 18, 1961. The prototype was installed in a 1953 Buick V-8 and driven from Lockport, New York to Towson, Maryland with the electronic control unit sitting on the front floor. According to chief engineer Robert Sutton, "Once we got to the Radio Division at Towson, we discussed with their engineers what we had in mind (to create the production electronics for a commercial version). They said there was no way to electronically meter fuel for an automobile engine. We gave them a ride in our car and afterwards they were enthused and agreed that it might be possible."

Although Bendix succeeded in creating a production version (the Bendix Electrojector) they failed to generate much interest in Detroit and eventually killed their fuel injection development projects in 1961 after investing more than one million dollars in research and development. They granted patent rights and signed cross-license agreements with Robert Bosch in 1966 and 1968, and jointly negotiated license agreements with Nippodenso of Japan and Joseph Lucas Industries of Great Britain. These agreements resulted in a sharing of technology from this point forward, which continues to this day.

By 1966, electronic fuel injection was heralded as the solution to the world's emerging pollution problems and, despite its added cost over carbureted systems, appeared on a number of production cars of the period. Bosch developed their first electronic system under the Bendix patents in '66 through '68, introducing the D-Jetronic system (as it was later called) on various SAAB models. In 1973, the D-Jet system was phased out in favor of the L-Jetronic system designed by Heinrich Knapp, chief engineer of fuel injection systems at Bosch. All of these systems used intermittent injection techniques — injectors that used electricity to turn on and off the fuel stream in step with the opening of the cylinder intake valves. The amount of fuel delivered for a given volume of air was determined by the on-time of the injector, as determined by a computer that measured, among other inputs, the air flow into the engine.

Despite advances in electronics technology these systems were expensive, primarily



Crimp or Solder Standard 1/4" Spade Lug to Short Piece of Insulated Wire

View of RPM Relay Socket (Relay Side)

For Testing Purposes Only: To Run Fuel Pump Continuously For Short Periods of Time Remove Relay and Insert Jumper in Positions 30 and 87

RPM Relay (Black W/Blue Base)

Relay Compartment - Located Behind Passenger Seat Under Package Shelf

RPM RELAY

due to the costs of the computer and the electrically-operated precision injectors. Heinrich Knapp reasoned that a system which produced a continuous fuel stream from the injector would cost considerably less than a system that required solenoid-operated injectors. The DeLorean's K-Jetronic system is the direct result of this design effort.

K-JET TECHNOLOGY

The K-Jetronic borrows the Jetronic name from its predecessors, but the similarity ends there. Basically the K-Jet system differs from previous models in that electronic control of injector on/off times is not used. Instead, K-Jet mechanically "measures" air flow into the engine (via the amount of deflection of an air plate just downstream of the air cleaner) and continuously injects a proportional amount of fuel into the intake air stream just ahead of each of the engine's intake valves. The air deflection plate is mechanically linked to a fuel distribution unit that determines the correct fuel flow rate to the injectors. Since fuel is continuously injected, the mechanical "computer" must create a fuel spray that represents the average requirements of the engine over a short period of time.

Some injection systems use a single injector located in the center of the intake manifold, letting the manifold distribute the resulting air/fuel mixture in the same manner as a conventional carbureted engine. The DeLorean and other K-Jet systems use individual injectors at the intake valve positions to avoid "wetting" the intake manifold passages and creating an artificially lean condition at the cylinders. By injecting fuel near the intake valves, the satisfactory engine performance is achieved with the leanest mixture possible, resulting in improved fuel economy and reduced emissions.

BASIC COMPONENTS OF THE K-JET SYSTEM USED ON THE DELOREAN:

High-Pressure Fuel Pump - the DeLorean uses an electric roller-cell fuel pump located under the inspection plate in the spare tire well. It is suspended in the fuel tank by a rubber "boot" that also serves as a shock mount and a noise suppressor, and it continuously delivers fuel at high pressure at a rate that exceeds worst-case engine consumption. The pump is equipped with a one-way valve which helps maintain residual fuel pressure in the fuel lines when the pump is shut off. Original DeLorean fuel pumps had a non-

CONTINUED ON PAGE 30

FUEL INJECTION *(FROM PAGE 29)*

serviceable check valve that nearly always failed. Redesigned pumps available today have a replaceable valve that rarely fails at all.

RPM Relay - Although not strictly a part of the fuel system, this relay located in the lower rear of the DeLorean's relay compartment, supplies electricity to the fuel pump. It is activated whenever the ignition is ON and the relay senses pulses from the ignition coil. If the engine stalls, the RPM relay senses the lack of keep-alive pulses from the ignition coil and shuts off the pump. Some (but not many) fuel delivery problems are actually ignition problems that prevent the RPM relay from energizing. Service personnel will need to bypass this relay to test the fuel system pressure without running the engine, so be prepared to tell non-DeLorean repair technicians where this relay is located. Figure 2 shows the location of this relay and shows how to bypass it for test purposes.

Fuel Accumulator - Located in a virtually inaccessible position in the DeLorean's center chassis frame, the fuel accumulator dampens any fluctuations in fuel pressure caused by changes in the pump output (i.e., electrical fluctuations or mechanical shocks) and cushions the rest of the injection system from the shocks associated with pump start-up and shutoff. If you have ever heard the water pipes in your house rattle when a faucet is turned off, you will appreciate the need for this type of cushion. The accumulator also contains a stop valve which helps maintain residual fuel pressure in the fuel lines when the pump is shut off.

Fuel Filter - Located under the DeLorean near the rear driver-side wheel, the fuel filter is a special high-pressure aluminum cannister containing a paper filter with a large surface area. According to Chilton's Guide to Fuel Injection and Feedback Carburetors, the filter plays a role in reducing the amount of water entering the fuel distributor, a very expensive and rust-prone component of the fuel system. Frequent replacement of the filter is thought to reduce the risk of rust damage.

Mixture Control Unit with Air Flow Meter and Control Pressure Regulator -

This is the brains of the injection system. Located under the DeLorean's air cleaner, the air flow meter is a circular plate that deflects downward in proportion to the volume of air entering the engine. Downward deflection is mechanically transmitted to the Mixture Controller located on the same aluminum casting as the air flow meter, directly behind the air cleaner. The mixture control unit meters fuel flow to the injectors in proportion to the physical position of the air meter's deflection plate. To maintain a constant fuel delivery pressure from the pump, the pressure regulator balances incoming fuel pressure against a calibrated spring inside the flow metering assembly.

If the pressure from the pump is higher than the "pressure" exerted by the spring, the spring is compressed slightly which opens up a passage to the fuel that returns excess fuel to the fuel tank. The resulting constant pressure at the regulator is about 54 PSI, adjustable (but rarely necessary) by adding special shims between the spring and the fuel return passage.

Warm-Up Regulator - The warm-up regulator adjusts (enriches) the fuel mixture whenever the engine is cold, to prevent combustion miss whenever while the engine warms up. The unit is mounted directly on the engine's left valve cover to pick up and react to engine heat. Additionally, it is electrically heated by an internal resistive element that is energized whenever the ignition is on. Either engine heat or heat from the electric element return the enrichment and return the air/fuel mixture to normal when the engine reaches operating temperature.

This unit on the DeLorean also includes a full-load enrichment circuit that monitors engine manifold vacuum. When the vacuum is suddenly decreased (such as when the accelerator is abruptly floored), manifold vacuum is reduced and the regulator enriches the mixture for better acceleration. Some regulators, including the model used on the DeLorean, also have a high-altitude compensation circuit that adjusts the air/fuel mix in higher altitudes. The short rubber hose that connects to a port on the top of the regulator (and is free on the other end) is part of this option, and care should be taken to avoid blockage or loss of this tube.

Fuel Injectors - The six injectors used on the DeLorean are located in the left and right cylinder banks near the spark plugs. All injectors inject fuel all the time that the engine is running,, and, when mixed with air in the intake manifold, the resultant mixture is sucked into whichever cylinder's intake valve is open at the time. The injector nozzle is designed to shut off fuel flow below a minimum pressure, or produce a fuel "fog" of tiny droplets whenever fuel is delivered at a pressure of at least 48-50 PSI. Each injector has an internal nylon mesh filter with holes of about fifteen micromillimeters width, so clogging is possible.

The injectors are mounted in plastic carriers that help insulate the injector from engine heat and provide an adequate seal to prevent air leakage around the injector. A three-pronged spring-steel clip holds the injector in place. Replace the seal and the clip whenever the injector is replaced. These injectors are about $33 each at best (considerably more at full list price) so change the DeLorean's fuel filter regularly or you will be buying and cleaning them before long. Since these are high-pressure nozzles, extreme care must be taken when testing these devices, or when any portion of the DeLorean's fuel system is tested or serviced.

Cold-Start Valve - The DeLorean uses a cold start valve to provide fuel enrichment to the cylinders whenever the engine is first cranked with a coolant temperature below 68 degrees F. The need for enrichment is due to the condensation of some fuel vapor on cold cylinder walls, which effectively leans out the mixture and makes starting difficult. The valve is controlled by an electric device called a thermo-time switch, located in a completely inaccessible place on a coolant pipe under the intake manifold.

The cold-start valve is similar to an electric fuel injector, activated by the thermo-time switch for only a few seconds, and only on a cold engine. The switch is equipped with an internal electric heater element that heats up a set of electrical contacts inside the switch. When the DeLorean's ignition is turned on, electricity is applied simultaneously to the cold start valve through the thermo-time switch. Fuel is injected for about 3-10 seconds, depending on engine temperature, after which the heater opens the contacts and the injector is shut off. If coolant temperature is above 68 degrees F., the contacts inside the thermo-time switch are always open, so the cold start valve is not activated at all.

The valve is located on a flanged pipe extending upward from the left side of the air cleaner. The pipe connects to the approximate center of the intake manifold, such that fuel sprayed into the pipe by the cold start valve is evenly distributed to all six cylinders.

Auxiliary Air Regulator - Many K-Jet-equipped systems use an Auxiliary Air Valve to increase engine idle speed when the engine is cold. The DeLorean uses an electronically-controlled Constant Idle System (C.I.S.) for this function, which is fully described in the DeLorean service manual. It is mentioned here since most commercial K-Jet service manuals (including those listed here) seem to expect you to find this device, which you will be unable to do on a DeLorean.

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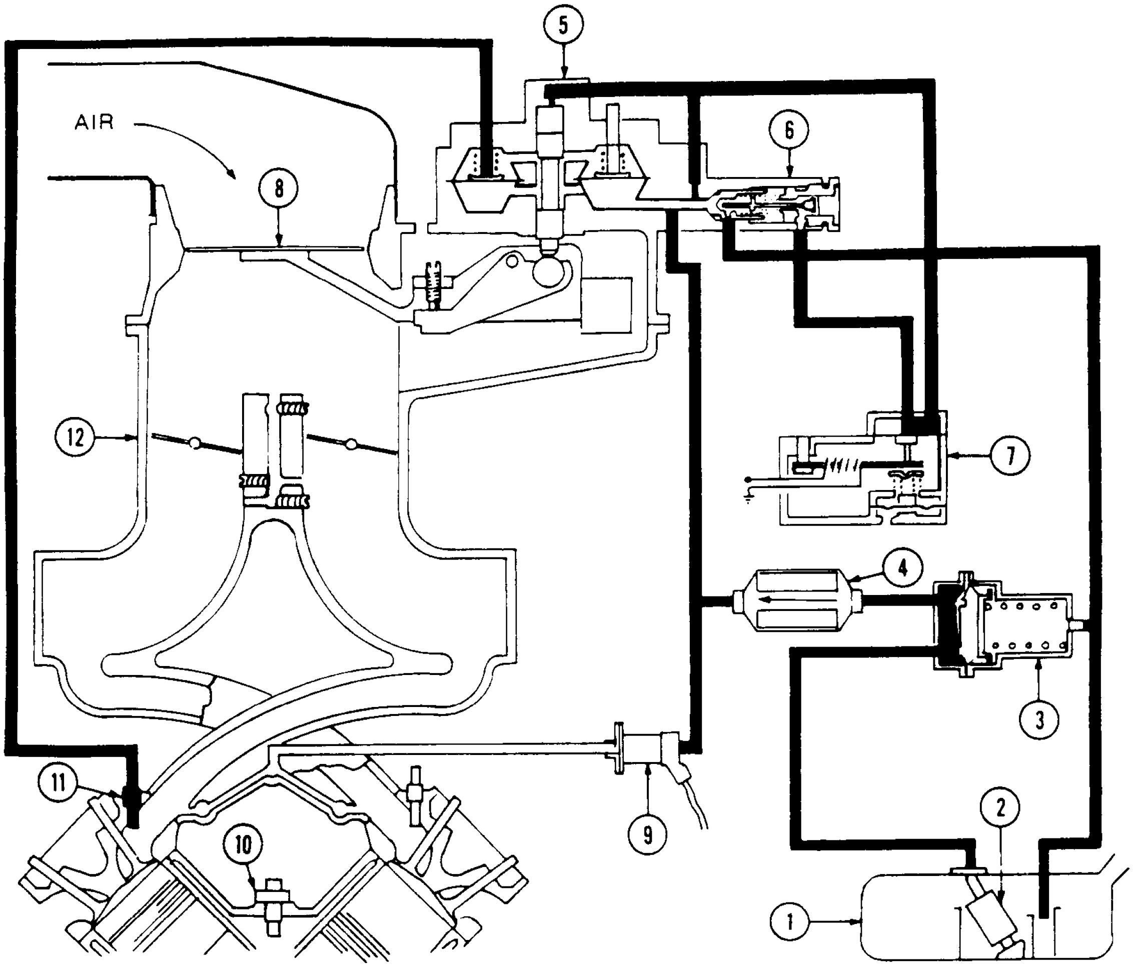

COMPONENTS AND DESCRIPTION

1. **Fuel Tank**
   A molded plastic fuel tank is located in the front wishbone of the frame. Access to the tank components is gained by removing the inspection panel inside the trunk.
2. **Fuel Pump**
   An electric rotary pump is used to provide fuel for the system. The pump is mounted inside the fuel tank.
3. **Fuel Accumulator**
   The accumulator keeps the system under pressure when the pump is not running. The accumulator is mounted inside the rear section of the frame backbone.
4. **Fuel Filter**
   A special filter is used to remove foreign particles from the fuel. The filter is mounted on the left rear frame rail.
5. **Fuel Distributor**
   The fuel distributor determines the necessary volume of fuel to be delivered to each injector.
6. **Primary Pressure Regulator**
   The primary pressure regulator controls the primary or main line fuel pressure in the system. The regulator is located inside the fuel distributor.
7. **Control Pressure Regulator**
   The control pressure regulator provides fuel enrichment during warm up and cold acceleration. The regulator is mounted on the left valve cover.
8. **Air Flow Sensor**
   The air flow sensor measures the amount of air entering the engine.
9. **Cold Start Valve**
   An electrically operated cold start valve is used to supply extra fuel to the engine during cold start conditions. The valve is mounted on the left side of the engine.
10. **Thermo-Time Switch**
    The thermo-time switch regulates injection time of the cold start valve. The switch is mounted in the thermostat housing.
11. **Injectors**
    The injectors are always open when the engine is running. Their main function is to atomize the fuel as it enters the intake chambers. The injectors are mounted in the cylinder heads.
12. **Throttle Valves**
    The throttle valves control the amount of air entering the engine. The throttle valves are located between the mixture control unit and the intake manifold.

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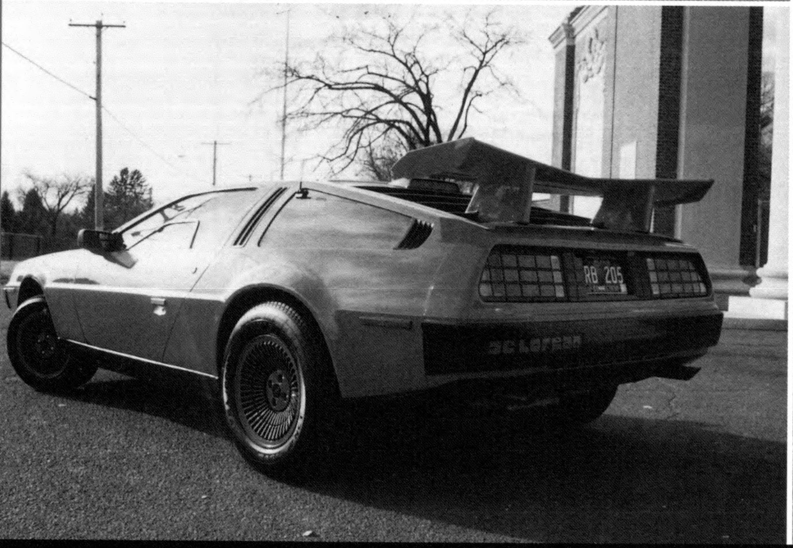

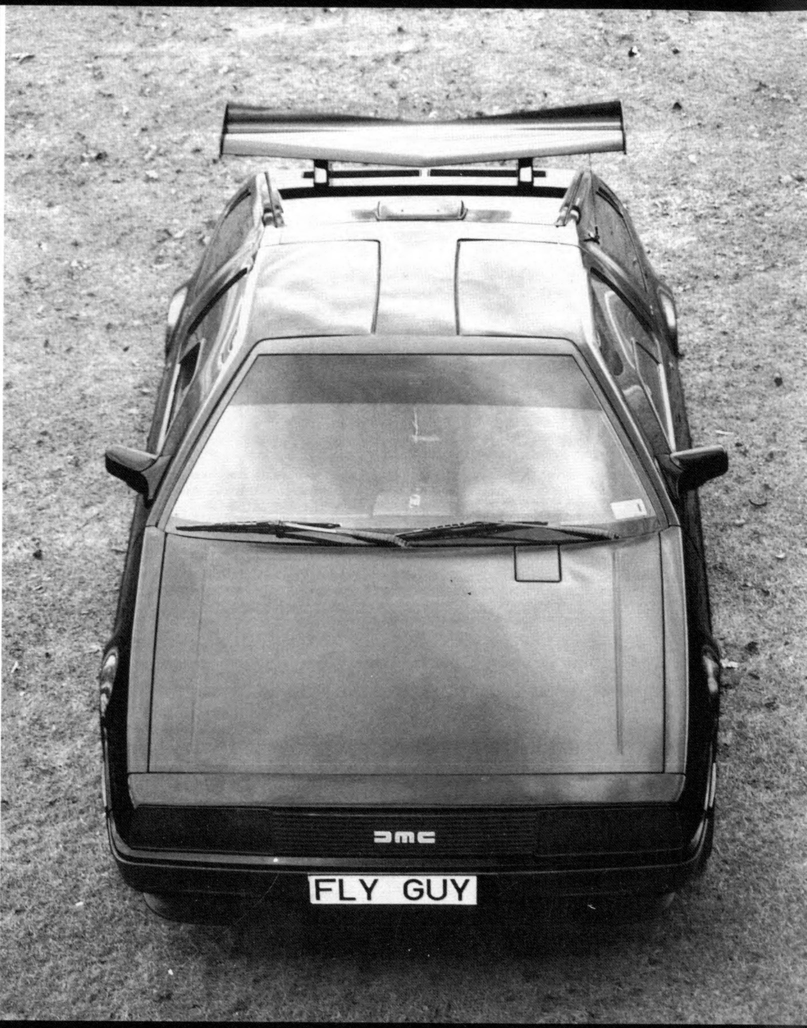

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FUEL INJECTION *(from page 31)*

COMMON FUEL INJECTION PROBLEMS

The most common problem blamed on the DeLorean fuel injection system isn't with the injection system at all. As our vehicles age, various rubber components deteriorate and create vacuum leaks in critical locations in the intake system. Any air that enters the intake system without going past the metering plate changes the air/fuel mixture beyond the point where the mixture control unit can compensate, resulting in an incorrect mixture.

Most vacuum leaks occur on rubber hoses that port vacuum over to various accessories. The power brake system uses vacuum to assist braking action, and the under-dash air control doors are vacuum actuated as well. Check the hose connections to these devices for cracks and loose fit.

Vacuum lines also connect to the vacuum advance unit and control solenoid on the distributor, and to the warm-up regulator.

There is a rubber bellows that joins the air/fuel mixture casting to the aluminum casting that houses the throttle plates. Some of these have become brittle, and a leak here will have a drastic effect on air/fuel ratio. If you have ever removed the manifold section above the water pump (to expose the throttle plates or to replace the water hose underneath), air can leak into the joint if you failed to replace the O-ring and paper gaskets, or if the mounting bolts are not properly tightened.

Another occasional air leak is a loose injector or damaged plastic injector mounting bushing. The injectors are normally somewhat loose in their mounts, but they seal well when manifold vacuum is present, so leaks here are difficult to confirm. Usually real leaks are severe enough to cause obvious engine misfire.

Don't forget to inspect the hose connections on the fuel evaporative cannister. Remove the plate on the inside of the left pontoon where vacuum and fuel lines pass through to the cannister located inside the pontoon. Check for hose deterioration or looseness.

If the entire intake manifold has been removed, the six O-ring gaskets that seal the manifold to the engine block must be replaced, and the manifold mounting bolts tightened to torque specifications.

Professionals often use a propane torch to find these and other vacuum leaks. The torch is fitted with a small 1/16th-inch brass tube that serves as a probe. The engine is started, and propane is allowed to escape from the end of the tube (don't light it!). The end of the tube is passed over possible air leaks and the technician listens for changes in engine RPM. When the propane is brought near the leak, it is sucked into the air/fuel stream in place of surrounding air, which enriches the air/fuel mix, changing the engine's operation and usually increasing RPM slightly.

A less dangerous technique is to pressurize the manifold slightly by applying low air pressure to one of the manifold vacuum ports (toward the manifold) after first blocking off vacuum-operated accessory ports. With the engine switched off, a soap and water solution is sprayed lightly over the area. Air leaks will often show up as soap bubbles.

Another area of concern for DeLorean owners is rust contamination - not from the fuel tank, but from water inside the fuel distributor! The K-Jet system is designed to trap any water in the fuel in a small area in the center of the fuel distributor, which will eventually rust out the unit, or at least create enough rust particles to interfere with proper operation. If the engine is started frequently and allowed to reach full operating temperature this is not usually a problem, since engine heat will help vaporize any water in this area. If run infrequently, water tends to accumulate here and cause damage to this expensive component.

Other fuel injection problems can usually be pinpointed through a series of standardized tests that check fuel pressure at various points, and under various conditions. The test require a special K-Jet Fuel Injection Test Gauge, since ordinary fuel pressure gauges lack the proper pressure range, and usually lack the correct threaded fittings for K-Jet systems. A low cost gauge set suitable for the do-it-yourselfer is available for about $50 from J.C. Whitney and Co., part number 12-3617U. Anyone qualified to run a do-it-yourself operation on a high-pressure injection system knows who J.C. Whitney Company is, so no need to explain further. The gauge comes with all necessary fittings and a less-than-elegant set of instructions.

A description of all test procedures is beyond the scope of this article (or the space available in the magazine), but several excellent manuals are available on K-Jet systems (see listing at the end of this article) that go into great detail on proper service procedures. However, tests are described below in general terms and any noteworthy differences between standard K-Jet procedures in the referenced service manuals and equivalent tests on the DeLorean are detailed. Please do not attempt to service your injection system without consulting at least one of these manuals for specific techniques and safety precautions not presented here.

TESTING K-JET SYSTEMS

First a few words of caution before we get into test procedures. Since the K-Jet system employs potentially dangerous high-pressure fuel delivery techniques (up to 70 PSI), service should be performed only by individuals knowledgeable in this type of environment. The tests require "tapping" a high-pressure fuel line with a pressure gauge, and the potential for fuel leakage onto hot engine components, or spray into the eyes, can create serious fire and safety hazards. The procedure is safe if proper care is exercised, but if you do not feel comfortable with these procedures, take your DeLorean to a qualified repair center and use your knowledge of the system to validate what your mechanic tells you and help avoid unnecessary repair charges.

The DeLorean service manual has a good description of K-Jet operation, including some service instructions. You will need the specification data from this manual to complete the tests, since specs vary between DeLorean and other K-Jet systems, and (predictably), the commercial manuals don't go into specific detail on DeLoreans.

GAUGE CONNECTION

The referenced gauge connects between the fuel distributor and the warm-up regulator at the point shown in the DeLorean service manual. The gauge set includes a shutoff valve to stop fuel flow through the gauge hose to the warm-up regulator during certain tests, while allowing the gauge to continue to monitor pressure at the fuel distributor. The free end of the hose that does NOT connect directly to the valve should go to the fuel distributor. If you connect it backwards, shutting off the valve will shut off the gauge reading. The gauge comes with a set of fittings; use the fittings that the included instructions suggest for Volvo models.

BASIC TESTS

Basic tests for the DeLorean fuel system that are made without the gauge are:

Fuel Volume Test - Tests the volume of fuel delivered by the pump by measuring the amount of fuel delivered in 30 seconds of

CONTINUED ON PAGE 34)

FUEL INJECTION *(FROM PAGE 33)*

pump operation - about 1 quart. Nothing special here, except that you will need to run the fuel pump without running the engine. Figure 1 shows how to activate the fuel pump without starting the engine. Otherwise, instructions in referenced manuals apply as written.

Fuel Injector Test - Tests the volume of fuel delivered by each injector and the spray pattern. Ideally volume and pattern will be nearly the same, since you want each cylinder to get the same fuel/air charge. The test involves removing all injectors at once and placing their spray ends in jars (baby food jars work fine). Run the pump as shown in Figure 1 to about half-fill the jars, following standard procedures shown in the manuals. The procedures may ask you to raise the air sensor plate to start fuel delivery; in the DeLorean you depress the plate instead, since the DeLorean uses a downdraft venturi and the manuals consistently depict the updraft models.

Tests to determine if the fuel system is properly functioning require the gauge set and are performed in the following sequence:

Cold control pressure - tests a pressure used to control the amount of fuel delivered to the injectors while the engine is cold (not run for several hours)

Hot control pressure - same as above after engine has reached temperature of at least 68 degrees F. (20 degrees C.)

Primary pressure - Pressure delivered by the fuel pump, as regulated by the Pressure Regulator in the Fuel Distributor.

Rest Pressure - Residual pressure remaining in the system about 20 minutes after the engine is shut off.

All of these functional tests are conducted with the gauge connected as described above, and with the gauge valve open, except the Primary Pressure test, which is made with the valve closed. Follow standard instructions in the referenced manuals, substituting specifications from the DeLorean manual as appropriate. You will recognize the proper substitution, since the tables and graphs described in the commercial manuals are printed in virtually identical form in the DeLorean service manual.

This is not a complete description of all tests and adjustments that can be performed, but the remainder of the tests described in the referenced manuals apply equally to all K-Jet systems and need not be detailed here. Read up on K-Jet from at least one of the referenced books before starting, get your DeLorean service manual handy, and see if you can track down that elusive fuel system problem.

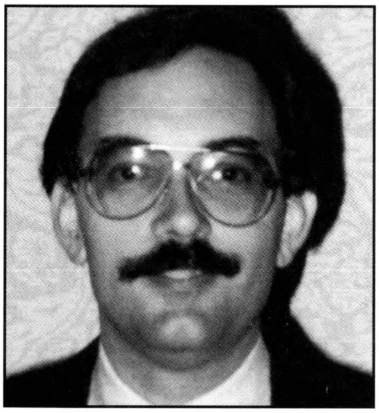
REFERENCE MANUALS OF INTEREST:

Mitchell's Electronic Fuel Injection Troubleshooting Guide for Import Vehicles - published by Fisher Books, P.O. Box 38040, Tucson, AZ 85740-8040., ISBN 1-55561-031-5. Available from J.C. Whitney and Co. as part number 16-6253A, about $17.95. An excellent manual on K-Jet systems; the best troubleshooting guide of this lot. Some good bookstores carry this manual.

Chilton's Guide to Fuel Injection and Feed-Back Carburetors - published by Chilton Book Company, Chilton Way, Radnor, PA 19089. No ISBN number. Available at almost any automotive shop, including Pep Boys and Chief Auto parts chains. Good section on K-Jet, but contains some errors that are mostly obvious. Good illustrations and tips/techniques. Cover much the same material as the Mitchell's guide, but enough different that both are worthwhile to own.

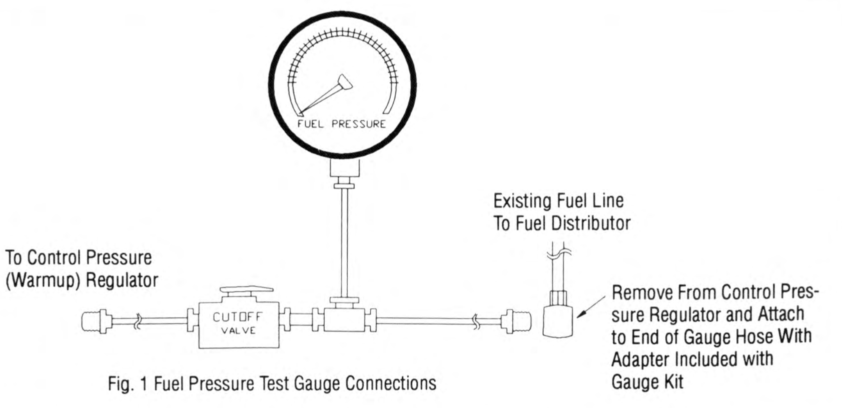
Automotive Fuel Injection Systems - A Technical Guide, by Jan P. Norbye - published by Motorbooks International, Osceola, Wisconsin 54020. Uncommon manual; I found mine at a Bookstop outlet. Tells all about Bosch, K-Jet, and every other conceivable fuel injection system ever introduced in the free world, except how to fix them. Outstanding history lesson, and details about K-Jet go right down to the designers' names and the formulas for determining the size of the air deflection plate. Interesting, but buy one of the others if interested in service procedures.

MORE TECH NOTES PAGE 38



ABOUT THE AUTHOR

Mark Hershey is a former electronics engineer now working in the telecommunications industry as Director of Customer Service for VMX, Inc., a manufacturer of voice message equipment. He is a 1975 graduate of Oklahoma State University, where he developed interests in computers, amateur radio, antique telephones, and anything non-automotive. Mark's inexperience with automotive technology did little to suppress a strong desire to own a DeLorean, which he finally realized with the purchase of a weathered specimen two years ago. Mark has agreed to share what he learned as an owner about servicing and restoring a DeLorean, starting this month with a story on the DeLorean's fuel injection system.


FUEL PRESSURE
Existing Fuel Line
To Fuel Distributor
To Control Pressure
(Warmup) Regulator
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VALVE
Remove From Control Pressure Regulator and Attach to End of Gauge Hose With Adapter Included with Gauge Kit

Fig. 1 Fuel Pressure Test Gauge Connections

FUEL PRESSURE TEST GAUGE CONNECTIONS

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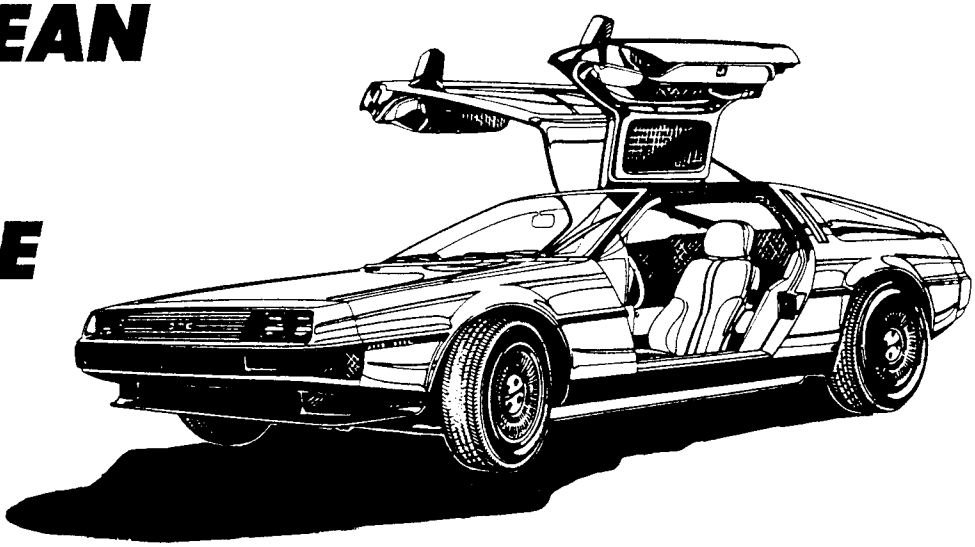

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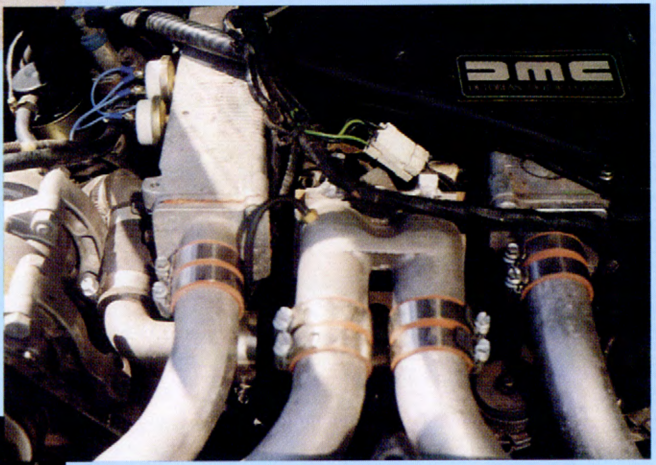

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CHANGE THE FACE on your DeLorean Speedometer (in good working condition) to 170 mph and recalibrate. $95.00 plus $4.50 shipping California residents add 6.5% sales tax. DELOREAN ONE, 9006 Owensmouth Ave., Canoga Park, CA 91304. Call one of our toll free Hotlines (800) DMC-HELP; (800) USA-DMC1 or California (818) 341-1796 or Texas (713) 568-9573.

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DeLorean Owners Association members only. $.30 per word. Submit typewritten copy only, accompanied by check.

ERRATA

(Errors and omissions from last issue)

Reference: Torquing Trailing Arms

Page 34, Column 1, Paragraph 1 should read:
A fastener (a bolt in this case) has what's known as a yield point. This is the point of distortion (twisting and stretching) that is its elastic limit. Distortion at or below that point will not be permanent. When the bolt is loosened, it will return to its original dimensions. Going beyond that point will cause permanent distortion, weakness and ultimate failure...

Page 34, Column 2, Paragragh 1 should read:
The bolt is an m12 x 19 that is coated with zinc plus iridescent chromate. This means it has significantly better resistance to white corrosion than bare zinc and it will resist a 72 hour salt spray. Its tensile strength is approximately 120,000 pounds per square inch and its hardness is about 27 on the Rockwell Scale.

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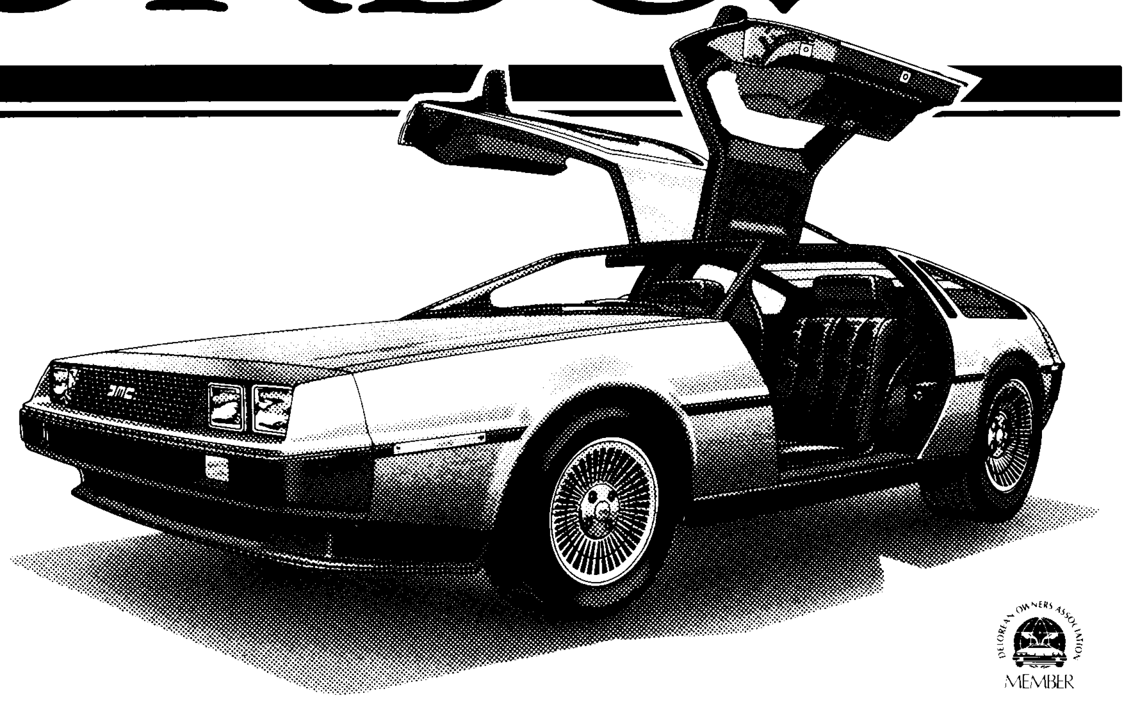

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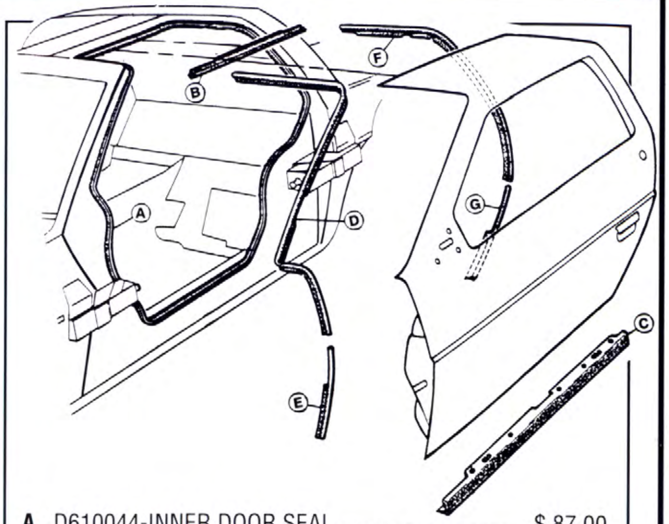

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